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GEORGIA

TUBERCULOSIS PREVENTION PROJECT

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Submitted to:

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LIST OF ACRONYMS

ACSM	Advocacy, Communications, and Social Mobilization
AFB	Acid- Fast Bacilli
AIDS	Acquired Immune Deficiency Syndrome
AOTR	Agreement Officer's Technical Representative
BCC	Behavior Change Communications
BCG	Bacille Calmette-Guerin
CCM	Country Coordinating Mechanism
CDR	Case Detection Rate
CME	Continuing Medical Education
CPD	Continuous Professional Development
CPF	Continuous Professional Feedback
DOTS	Directly Observed Treatment Short-course Strategy
DR TB	Drug Resistant Tuberculosis
DQA	Data Quality Audit
DST	Drug Sensitivity Testing
e-MIS	e-Health management information system
EC	European Commission
EDR	Electronic Drug Register
EQA	External Quality Assurance
EURACT	European Academy of Teachers in General Practice and Family Medicine
FDC	Fixed Dose Combination
FM	Family Medicine
FP	Family Physicians
GFATM	Global Fund to Fight AIDS, TB, and Malaria
GFMA	Georgia Family Medicine Association
GF	Global Fund
GMCU	Georgian Maternal and Child Care Union
GPN	General Practice Nurse
GHI	Global Health Initiative
GLC	Green Light Committee
GOG	Government of Georgia
GP	General Practitioner
GSC	Grants Selection Committee
HBC	High Burden Country
HC	Health Center
HCI	Health Care Improvement Project



HIS	Health Information System
HIV	Human immunodeficiency virus
HMIS	Health Management Information System
HSSP	Health Systems Strengthening Project
HPDP	Health Promotion and Disease Prevention
HR	Human Resources
IC	Infection Control
IEE	Initial Environmental Examination
IUATLD	International Union against Tuberculosis and Lung Disease
KAP	Knowledge, Attitudes, and Practices
MCQ	Multiple Choice Questionnaire
MDG	Millennium Development Goals
MDR TB	Multidrug-resistant Tuberculosis
M&E	Monitoring and Evaluation
MoE	Ministry of Education
MoLHSA	Ministry of Labour, Health and Social Affairs of Georgia
MoCLA	Ministry of Corrections and Legal Assistance of Georgia
MoU	Memorandum of Understanding
NCDCPH	National Center of Disease Control and Public Health
NCTLD	National Center for Tuberculosis and Lung Disease
NGO	Non-governmental Organization
NTP	National Tuberculosis Program
OR	Operational Research
PCP	Primary Care Provider
PHC	Primary Health Care
PMDT	Programmatic Management of Drug-Resistant TB
PMIS	Project Management Information System
PMP	Performance Monitoring Plan
PPM	Public Private Mix
PR	Principal Recipient
PSA	Public Service Announcement
QA	Quality Assurance
QI	Quality Improvement
RFA	Request for Applications
SLD	Second Line Drugs
TAT	Turnaround Time
TB	Tuberculosis



TNA	Training Needs Assessment
TPP	Tuberculosis Prevention Project, USAID Georgia
TSMU	Tbilisi State Medical University
TSR	Treatment Success Rate
TST	Tuberculin Skin Test
URC	University Research Co., LLC
USAID	United States Agency for International Development
USG	United States Government
VCT	Voluntary Counseling and Testing
WONCA	World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians
XDR TB	Extensively Drug-Resistant Tuberculosis



I. Executive Summary

This report outlines activities undertaken within the Year 2 of the USAID Tuberculosis Prevention Project (TPP) implementation from October 1st 2012 to September 30th 2013. During Year 2 the project made significant steps forward and reached tangible results described below. Important achievements of the year two were elaboration of the National TB Strategy and action plan for 2013-2015 and revision of Georgian legislation to improve the policy environment for better TB control.

Key milestones under each objectives of this period include:

- **Objective 1: Improve early detection of presumptive tuberculosis (TB) cases**
 - 301 family physicians and 307 general practice nurses employed in Ajara, Samegrelo-ZemoSvaneti, Imereti and Mtskheta-Mtianeti regions trained in TB prevention, early detection, referral, and long-term support.
 - 100 TB and HIV physicians trained in detection, prevention, and management of TB/HIV co-infection.
 - 100 TB physicians trained in usage of new algorithms for rapid diagnosis of TB by Xpert MTB/RIF System.
 - 81 VCT consultants, regional coordinators, social workers, and laboratory technicians of Georgian Harm Reduction Network (GHRN) trained in TB prevention, early detection, referral, and long-term support.
 - 153 epidemiologists of NCDC trained in tracing of TB Contacts, Ex-prisoners, and Lost to Follow Up.
 - Computer-based training module developed, posted on web-site and recorded on 2000 CDs.
 - 20 adult and 5 pediatric clinical case studies were developed, posted on the website, printed, and distributed to TB specialists and PHC providers.
- **Objective 2: Strengthen the quality of full implementation of DOTS and DOTS plus**
 - National TB Strategy and action plan for 2013-2015 was developed and endorsed by CCM.
 - Revision of TB related legislation initiated in order to support strengthening of regulatory framework for TB Control in Georgia.
 - 335 sites were visited for performance appraisal of 670 trained general practitioners.
 - 7 quality improvement collaborative sessions were held nationwide for TB specialists, PHC providers, public health specialists, and managers.
 - TB Management Guidelines for adults and children were developed, printed and disseminated to TB specialists and other audiences.
 - 4 Journal club meetings conducted for TB specialists.
 - Thirteen TB care protocols for nurses elaborated and 83 TB nurses trained in implementation of these protocols.
 - 30 patients - peer educators trained.
 - 24 NGOs, more than 100 teachers, school children, and representatives of Georgian Orthodox Church trained on TB policies and stigma reduction strategies.
 - 5 TV rolls developed and aired and 6 TV talk-shows arranged.
 - More than 20000 copies of informational materials: job-aids, brochures for PHC providers, brochures for patients, postcards, leaflets, calendars, posters, stickers printed and distributed.
 - Survey of Risk Factors Associated with Default from Treatment among MDR TB patients conducted and findings presented to stakeholders.
 - TB HMIS module has been developed.
 - 6 small grants awarded to local NGOs and professional associations.



- **Objective 3: Provide limited assistance to recently established private treatment sites nationwide in updating physical infrastructure to meet TB standards and to improve infection control**
 - Ventilation systems installed in 30 facilities.

II. Introduction

A. USAID Georgia Tuberculosis Prevention Project Objectives

The USAID Georgia Tuberculosis Prevention Project (TPP) is a four-year project that aims to contribute to achieving the overall USAID/Georgia and Government of Georgia's objective to **reduce the number of all tuberculosis (TB) cases in the country, thereby achieving its Millennium Development Goals (MDGs)**. The project goal is being achieved through the following three objectives:

- *Objective 1: Improve early detection of TB suspected cases in general health facilities;*

In accordance with the International Standards for Tuberculosis Care (ISTC) the timely detection of TB Suspected cases is an important public health responsibility of all health practitioners. The rate of TB case detection mainly depends on the correct management of presumptive TB Cases in all health care facilities, especially at Primary Health Care (PHC) level. Early detection of TB Suspected cases in PHC facilities is the key point of successful TB Management. Therefore, the main objective of USAID/Georgia TPP is to improve early detection of suspected TB Cases in general and PHC facilities by strengthening capacity of health providers in TB management. This is achieved through training interventions which will aim to ensure that front-line health workers can timely identify and correctly manage TB cases in scope of their competencies.

- *Objective 2: Strengthen the quality of full implementation of Directly Observed Treatment Short-course Strategy (DOTS) and DOTS plus nationwide;*

Within the new context of reform, where private insurance companies and private service providers are emerging as a key players in service provision, private sector providers need to be fully engaged in TB screening, treatment, or referrals. Evidence suggests that failure to involve all care providers used by presumptive TB and TB patients hampers case detection, delays diagnosis, leads to inappropriate and incomplete treatment, contributes to increasing drug resistance, and places an unnecessary financial burden on patients. Systematic involvement of all relevant health care providers in TB control promotes the use of ISTC and achievement of national and global TB control targets.

TPP is strengthening the full implementation of DOTS and DOTS plus nationwide to ensure that providers routinely adhere to effective, standardized treatment guidelines, as a means to improve treatment outcomes and reduce drug resistance. The project used training, technical assistance and continuous performance feedback to enhance the capacity of health care workers, and also develop health workers' capacity to support patients through treatment completion. In addition to provider capacity, the project addressed health sector issues related to supporting quality DOTS, including support to strengthen policy environment and program management, engage all providers in providing quality DOTS, and expand partnerships with communities and non-government organizations (NGOs) to support delivery of TB services.



- *Objective 3: Provide limited assistance to recently established private treatment sites nationwide in updating physical infrastructure to meet TB best practice standards, and to improve infection control.*

As a result of ongoing reforms, the majority of the district and regional TB clinics and dispensaries have been integrated into private general and multi-profile hospitals and primary care clinics. Sixty-five TB care points were established under the organizational umbrella of the general health clinics across the country. Those services are linked and provide supervision of family physicians and nurses implementing MDR TB care at a community level. As a result of relocation of TB service points to general hospitals, the need to strengthen IC measures increased dramatically. Considering the need for adequate air flow to avoid nosocomial transmission of TB, TPP supported installation of exhaust ventilation equipment in selected clinics.

B. Overview of Activities/ Results

In Year two, the project team worked closely with MoLHSA, NCDCPH, private hospitals, outpatient clinic networks and Family Medicine and TB specialists' professional associations to promote quality TB service delivery within the integrated model of care.

In order to encourage a greater involvement of primary care providers in TB detection and community based follow-up, USAID TPP continued trainings in early TB detection and management in general practice. The training has been delivered by the Georgia Family Medicine Association (GFMA) and the Association of TB and Lung Specialists. In Year 2, 608 FPs and nurses took the course. This initiative supports both capacity building of local providers as well as strengthening professional bodies. TPP employed adequate tools for continuous performance evaluation and professional feedback to training professionals to ensure sustainability of these efforts. The performance appraisal of 325 PHC teams conducted by the TPP in FY2013 proved the effectiveness of the training program in terms of developing adequate competencies to make timely recognition of presumptive TB and refer them to TB specialists.

On-site trainings have been supplemented with options for virtual feedback or online discussion groups among practitioners. The TPP has been collecting and analyzing clinical cases from real practice and disseminated case discussion bulletins to primary care providers on a quarterly basis. In FY 2013 the TPP team adapted computer-based TB training modules developed by URC geared towards refreshing private providers' knowledge of the International Standards of TB Care.

In Year 2 the TPP has initiated various activities aimed at achieving sustainable positive changes in the quality of TB services:

- (i) The TPP team, in collaboration with the Georgia Association of TB and Lung Specialists, elaborated clinical practice guidelines and protocols on TB diagnosis and management. The guideline was endorsed by MoLHSA. TPP promoted the guideline implementation through quality collaboration sessions. A guideline on management of childhood TB was also developed based on latest the World Health Organization (WHO) guides and will be submitted to MoLHSA for approval in early October 2013.
- (ii) TPP continued to support the establishment of quality improvement collaboratives within large private networks. Following the formation of quality teams, TPP introduced a clinical audit methodology as a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the



implementation of change and suggested key indicators of best practices based on the new TB management guideline.

The TPP team has been working with the high-level policy makers on strengthening the TB control framework. The National TB Strategy and Action Plan 2013-2015, developed with TPP support, were reviewed and officially endorsed by the Country Coordination Mechanism for TB, HIV/AIDS, and Malaria (CCM) - the high-level body that oversees implementation of the country's TB control program. The document will guide the complex transition from a vertical towards an integrated TB service delivery model, and the new involvement of multiple parties responsible for various components of the National TB response. This strategy will serve as a road map for national and international stakeholders in planning and implementing specific activities aimed at reducing the TB burden in the context of Georgia's health reform.

Implementation of the National TB Strategy requires adequate governance, good coordination, and support. Considering the severity of an epidemic and potential impact of ongoing transitions on the TB National Response, the Government of Georgia identified legal preparedness as a critical component in TB control. TPP supports the Parliamentary Committee for Health and Social Issues in development of an appropriate package of legislative changes for TB control.

Key results achieved in FY2013 are outlined in Table 1.

Table 1. Key results of USAID Georgia TB Prevention Project in FY2013

Objectives	Results
<i>Objective 1: Improve early detection of suspected tuberculosis (TB) Cases</i>	<ul style="list-style-type: none"> • 608 practitioners (36 FPs and 33 nurses in Samegrelo, 41 FPs and 39 nurses in Adjara, 25 FPs and 24 nurses in Mtskheta-Mtianeti, 166 FPs and 179 nurses in Imereti and 33 FPs and 32 nurses working in penitentiary facilities) were trained in "Early Detection and Management of TB at PHC level" • 100 TB and HIV physicians trained in detection, prevention, and management of TB/HIV co-infection. • 100 TB physicians trained in usage of new algorithms for rapid diagnosis of TB by Xpert MTB/RIF System. • 81 VCT consultants, regional coordinators, social workers, and laboratory technicians of Georgian Harm Reduction Network (GHRN) trained in TB prevention, early detection, referral, and long-term support. • 153 epidemiologists of NCDC trained in tracing of TB contacts, ex-prisoners and patients lost to follow up • 1000 job aids on TB detection were reprinted and disseminated to FPs and nurses nationwide. • Computer-based training module was developed, posted on web-site, and recorded on 2000 CDs. • 20 adult and 5 pediatric clinical case studies were developed, posted on the website, printed and distributed to TB specialists and PHC providers • Performance appraisals of 325 family medicine teams in TB service delivery was conducted. • Four communication campaigns implemented <ul style="list-style-type: none"> ○ World TB day campaign on March 23th ○ Celebrities join fight against TB in prisons ○ Health NGO coalition for TB prevention



○ Georgian Orthodox Church for TB Prevention

Objective 2: Strengthen the quality of full implementation of DOTS and DOTS plus

- National TB Strategy and action plan for 2013-2015 was elaborated and endorsed by CCM
- Three new quality improvement collaboratives were established within the private service delivery networks ("My Family Clinic," "Geo-Hospitals," "MedicalPark-Georgia," "Medalfa"). Clinical audit methodology was introduced, core audit criteria and standards have been selected, and the audit was conducted in selected 30 facilities with support of regional coordinators.
- Collaboration established with MCLA to support anti-TB activities in penitentiary facilities
- TB management guideline and related protocols were approved by the Ministry of Labour, Health and Social Affairs.
- Childhood TB guideline has been developed.
- Quarterly Journal Club meetings for TB specialists conducted.
- With TPP support three small grantees, Georgia Nurses Association, Partnership for Social Initiatives, and Welfare Foundation implemented projects aimed at improving access to, demand for, and quality of TB services. TPP identified three new grantees: The Center of Bioethics Studies and Culture, Georgian Health Promotion and Education Foundation, and Georgian Phthisiologists and Pulmonologists Association.

Objective 3: Provide limited assistance to recently established private treatment sites nationwide in updating physical infrastructure to meet TB standards and to improve infection control

- Following the engineering assessment of TB service points, qualified companies invited by TPP installed ventilation equipment at 30 general hospitals.

III. Results by Objective

A. Objective 1: Improve Early Detection of Presumptive TB Cases

1. Trained PHC staff to recognize TB symptoms and test presumptive cases

In order to strengthen capacity of primary care providers in early detection and management of presumptive TB cases, URC established a new agreement with the Georgian Family Medicine Association to provide training for family physicians and general practice nurses. The GFMA contracted out and trained a pool of TB and Family Medicine (FM) trainers and thus created a capacity for a national roll-out of the training program in the coming years. In year 2 the project trained 301 FPs and 307 GPNs in Adjara, Samegrelo, Imereti and Mtskheta-Mtianeti Regions. Among those there were 28 FPs and 32 nurses from the penitentiary health facilities. The course was highly in demand and very positively evaluated by the participants.

The above mentioned training program was planned and implemented with close involvement and collaboration of all stakeholders including the professional associations, NCTBLD, MOLHSA, and the Global Fund Principal Recipient.



The TPP team provided monitoring of training in all regions, attended group sessions, and interviewed several trainees. The selected venues were convenient and suitably equipped for presentations and provided adequate environment for training. The trainers and trainees were provided with the training materials, stationery, and other necessary training aids. Interactive training methods were used and the participants were fully engaged. The trainees' feedback indicated they were supportive of the training and appreciative of both the information provided and the way in which it was delivered.

In order to achieve a wider coverage and target a greater proportion of FPs and GPNs particularly in rural areas, the TPP will continue training and cover 500 FPs and 500 GPNs during the next year.

2. Developed innovative strategies for ongoing support of PCP to refer TB presumptive cases to TB specialists

a) Clinical Case Discussion

The TPP team introduced 25 clinical case discussions to encourage critical thinking and strengthen problem solving skills of TB service providers. A compilation of examples of pulmonary and extra-pulmonary, drug sensitive and resistant TB, and presumptive, confirmed and non-confirmed adult and pediatric cases were developed. Cases were based on real patient experience in urban and rural primary care settings in Georgia. The TPP experts analyzed clinical case management examples according to the international standards. Positive feedback has been received from several physicians who had the opportunity to follow the steps given in the examples as a guide in daily practice. TPP team continues work on this series. Two publications with 10 cases in each were prepared, 1000 copies of each printed, and distributed to primary care physicians. Case studies are available electronically on the TPP and GFMA websites and can be used by health professionals for educational purposes (<http://www.gfma.ge/shemtxveva.php>).

b) Developing a computer-based training module on Tuberculosis detection and management for health care providers

Besides traditional training modalities, the TPP team used innovative approaches to improve coverage and ensure regular interaction with the training materials for all interested professionals. Although computer-based resources in Georgia are not widely utilized by village health care workers, there is a large cohort of primary care physicians and other specialists working in urban settings who have adequate access to the internet and can benefit from computer-based resources. The national statistics indicate that the physician to population ratio in the capital is 966 per 100000 population, with 24% of them being generalists (family physicians, general internists, or pediatricians). In absolute numbers this amounts to 2091 physicians (47% of all generalists in the country), who as front-line providers can face TB in their daily practice. It is highly likely that physicians practicing in other big towns such as Kutaisi and Batumi will also benefit from this opportunity.

In order to target this wide group of physicians with TB-related educational intervention, the TPP team adapted existing computer-based training modules developed by URC geared towards refreshing private providers' knowledge of the International Standards of TB Care.

The training module is accessible on the TPP webpage (http://tpp.ge/Online_learning/m6#.UmZ3UEQcCb8) and on CDs. 2000 CDs were produced. CDs were distributed to private clinics and primary care providers in Tbilisi and other big towns not covered with other training interventions.



3. Performance appraisal and continuous professional feedback to FM practitioners in TB service delivery

Although important, the training program alone cannot solve the systemic problems that hinder the implementation of the effective TB care models by primary care providers. Once gaps in the knowledge base are initially filled and very basic skills developed, it is important to explore the extent to which the trained providers retain newly acquired competencies, identify factors that have a substantial impact on their daily practice, and troubleshoot barriers in the delivery of TB related services. In addition to the formal, classroom-based training, PCPs should receive adequate mentoring and support in their usual care settings to reinforce skills acquisition. TB related performance of primary care physicians and nurses has to be analyzed on a regular basis and professional feedback provided to improve selected clinical outcomes.

A team composed of a family physician, a nurse, and a TB specialist made site visits to observe the practice and provide professional feedback according to the predefined criteria. In June-August 2013, the TPP appraisers conducted site visits to 670 rural physicians and nurses trained in TB detection and care in summer 2012, with the expectation that participants will have begun to put into practice skills and competencies gained during training.

Performance appraisal in TB management through supportive supervision visits is an innovative approach for Georgia. The appraisal is a very resource intensive process and requires commitment and substantial efforts from both sides. Appraisers and appraisees should be well prepared for the supervision visits to accomplish all objectives. The results of appraisees' satisfaction survey shows that they appreciated this opportunity and are willing to have it again.

Nevertheless, appraisers reported some difficulties that prevented them from conducting a comprehensive review and providing feedback. These include a lack of medical documentation and poorly organized appointment system that does not allow for direct observation on TB patient visits. The fact that most of FPs and GPNs do not face TB in their daily practice made it difficult to explore various aspects of TB management and provide recommendations for improvement. Although all providers demonstrated good working knowledge of presumptive TB signs and symptoms, those not currently involved in DOT did not show much interest for building their competencies in this area. TB related counseling was found to be a major area in which most of FPs and GPNs need further training. Adequate TB drug side effect management is another challenge faced by primary care providers and should be addressed in future educational interventions.

In summary, the initial performance appraisal experience revealed the following:

- The training program has had a positive impact in terms of developing adequate competencies to make timely recognition of presumptive TB and refer them to TB specialists;
- Knowledge on follow-up care has been applied when possible;
- Emphasis on drug side effect management indicates that GPNs pay more attention to this area;
- Training encouraged providers to create a patient friendly environment and make DOT sessions more patient oriented;
- Training encouraged providers to improve communication with patients and their families;
- Training encouraged primary care providers to improve communication with TB teams;
- Training has had a positive impact on FPs' and GPNs' attitudes towards TB diagnosis and management by building self-confidence and responsibility;



- Training encouraged providers to think of effective TB care models in general practice and helped them to identify institutional, environmental, and community factors that influence TB service delivery

4. BCC/ACSM Activities

a) World TB Day campaign

In light of the project goals, the TPP, in coordination with the Ministry of Labour, Health, and Social Affairs (MoLHSA), hosted several activities to mark World TB Day 2013, with messages geared toward all stakeholders, including policymakers, health care workers, patients, and society at large.

In preparation for World TB Day, the TPP team developed educational and promotional materials such as T-shirts, posters, banners, flyers, calendars, brochures, and pins with messages, information, and slogans about TB that were disseminated to students and the general public to raise awareness about this curable disease. TPP developed and aired on several national and regional channels a TV spot to raise public awareness on TB and reduce stigma.

An animated public service announcement (PSA) was prepared on TB related signs and symptoms. The PSA was aired by five TV companies (Public Broadcast, Imedi, Channel 9, Maestro and Adjara TV) that ensure countrywide coverage for a month. The video is also available on the TPP website (www.tpp.ge.)

On March 22, 2013, TPP hosted a conference of high level representatives of the US Government and the Government of Georgia, as well as other stakeholders, with over 80 participants in total. U.S. Ambassador Richard Norland joined First Lady Sandra Roelofs, the WHO Goodwill Ambassador for Health Related UN Millennium Development Goals in the European Region; the Ambassador of France to Georgia, Renaud Salins; the Deputy Minister of Labor, Health and Social Affairs, Mariam Jashi; the Deputy Minister of Corrections, Archil Talakvadze; the USAID Mission Director Stephen M. Haykin; and representatives of the National Center for Disease Control and Public Health (NCDC&PH), National Center for Tuberculosis and Lung Diseases (NCTLD), NGOs, and universities. These stakeholders discussed and analyzed the global trends, progress, and gaps in fighting TB in Georgia, implementation of the National TB program in prisons, the contribution of USAID TB Prevention Project, and collaboration on future activities aimed at preventing the spread of TB.

The conference was broadcasted by several Georgian TV channels.

<http://www.youtube.com/watch?v=K2uBgWCYb4c>

<http://www.youtube.com/watch?v=Fv7lon09lyY>

<http://www.youtube.com/watch?v=wfcmx1sc3XA>

b) Celebrities join the fight against TB

The USAID TB prevention Project also assisted the Ministry of Corrections and Legal Assistance of Georgia (MCLA) to celebrate World TB Day: with the assistance of the project team, a group of local Georgian celebrities participated in a photo session aimed at broadcasting messages in support of the fight against TB. The photo exhibition was held at Penitentiary Establishment #19 on March 24, 2013.

Coverage of the events can be found at the links below.

<http://www.mcla.gov.ge/index.php?action=news&lang=eng&npid=1198>

<http://www.youtube.com/watch?v=u-qWoL958Bs>



<http://www.youtube.com/watch?v=jjG0D9-Lou0>

<http://www.youtube.com/watch?v=k30ddytpFvk>

Organized around the World TB Day theme, “Stop TB in my lifetime,” the exhibition spotlighted photos of celebrities including well-known actors and sportsmen holding signs with messages showing their support for the fight against TB in Georgia and urging viewers to get tested and treated for TB. The event also aimed to reduce stigma against people with TB, emphasizing that TB control is a community effort.

c) University students take to the street to combat TB

To mark World TB Day, TPP in collaboration with Tbilisi State Medical University students organized an event in one of the central parks of Tbilisi. More than 60 students wearing T-shirts with messages related to TB distributed educational materials to pedestrians in the park. The students concluded World TB Day by creating a “human chain” to demonstrate their unity against TB in a main park of Tbilisi. The event was highlighted by TV channel “Rustavi 2” http://tpp.ge/World_TB_Day_2013/v12.

d) d) Participation in 43rd Union World Conference on Lung Health

The TPP team participated in 43rd Union World Conference on Lung Health that is the largest annual meeting focusing on the issues as they relate to low- and middle-income countries and populations. The TPP CoP made a presentation on approaches for working with the private sector to support MDR TB programs in Georgia. This was an excellent opportunity for sharing the Georgia experience with the international community and obtaining feedback of colleagues from various countries.

B. Objective 2: Strengthening the Quality of Full Implementation of DOTS and DOTS plus

1. National TB Strategy and Action Plan

The TB Strategy Working Group established under the auspices of the Country Coordinating Mechanism (CCM) completed the elaboration of TB strategy and action plan for 2013-2015. The strategy aims to stop the spread of TB in Georgia and reduce the TB burden by sustaining universal coverage of quality diagnosis and treatment of all TB patients, including those with M/XDR TB.

The core team of the group was composed of the director of National Center for TB and Lung Diseases; Director of Global Fund Projects Implementation Center, Director of Global Fund TB Program and CoP of USAID Georgia TPP. This group was extended to include representatives of the national and international institutions involved in TB programs, governance, planning and implementation. The TPP international consultant Dr. Sarah Royce provided technical guidance to the group of local experts in drafting the strategy.

During the planning process, the strategic objectives, indicators, targets, and activities were modified with stakeholder input. Targets were assessed in light of the stakeholders’ views of what is ambitious enough to meet the needs of the Georgia population, yet feasible to accomplish by 2016. The action plan and budget was developed to inform stakeholders on resources required in the immediate future to meet the targets. The TPP CoP presented a strategy draft at the CCM



meeting in December 2012. The CCM members agreed with the strategic objectives, targets and a set of core activities to be implemented during the next 2 years. The draft strategy was reviewed by the World Health Organization (WHO) TB team and finalized according to their feedback. The strategy was endorsed by the CCM in March 2013.

2. National TB Management Guidelines

a) TB management guideline

The TPP team, in close collaboration with the National Association of TB and Lung Specialists and MoLHSA, developed and submitted the National TB management guideline and corresponding clinical protocols to the Guideline Accreditation Board, MoLHSA. The guideline was approved by the order (N01-121/o) of the MoLHSA. This guideline and protocols will aid in the delivery of optimum clinical care to TB patients in both public and private sectors. On a national level, the guideline will be used as a direct means of quality improvement and play an important role in the development of performance measures. The TPP launched the guideline implementation through employing quality improvement collaborative approach. The TPP team started collecting data against selected quality indicators to establish baseline and demonstrate progress overtime.

b) Pediatric TB guideline

Awareness is growing that TB is an important preventable cause of disease and death among children in TB endemic areas. Any child living in a setting where there are people with infectious TB can become ill with TB.

TB illness in children is often missed or overlooked due to non-specific symptoms and difficulties in diagnosis, such as obtaining sputum from young children. Infants and young children are at increased risk of developing severe disseminated disease associated with high mortality, such as TB meningitis or miliary TB. At an operational level there remains an urgent need for feasible and implementable policies to guide management in resource limited settings.

USAID Georgia TB Prevention Project led a joint process to define and develop the pediatric TB care guideline. The guideline on management of childhood TB was developed and will be submitted to MoLHSA for approval in October 2013.

3. Support Community TB and TB/HIV services

In order to develop capacity of TB and HIV physicians in detection, prevention, and management of TB/HIV co-infection within TB and HIV settings of the civil health sector and the penitentiary system, TPP prepared a training program, titled, “Collaborative TB/HIV Activities – Countrywide Implementation of “3Is” Strategy” to target HIV and TB physicians in these sectors.

The training program aimed to improve knowledge and skills of participants on “3Is” Strategy and its components: Intensified TB case-finding (ICF) followed by high-quality anti-tuberculosis treatment, Isoniazid preventive therapy (IPT) and Infection control (IC) for TB;

A two day, 16 hour training course was delivered in 10 small groups in Tbilisi, Kutaisi, Zugdidi and Batumi. Training materials can be downloaded from the TPP web site:

http://tpp.ge/Training_materials/m49#.Ue4TbBNfoeE

In total, 100 participants were trained: 50 in Tbilisi (April 13-14, 2013 and April 20-21, 2013), 14 in Kutaisi (May 17-18, 2013), 19 in Zugdidi (May 19-20, 2013) and 17 in Batumi (May 24-25, 2013).



4. Memorandum of Understanding between USAID and the Ministry of Corrections and Legal Assistance of Georgia

Worldwide, correctional facilities have been recognized as a source of TB transmission to inmates, employees, and the community at large for decades. In Eastern Europe and Central Asia, the situation is made more serious by the existence of pools of infectious cases with drug-resistant forms of TB. Prisoners are not only more likely to become infected with the TB bacteria, but they are also less likely to be diagnosed with the disease, receive treatment once diagnosed, and have successful treatment outcomes even if they begin therapy. Furthermore, only 40% of patients diagnosed in prison actually complete their treatment if they are released from prison while still on therapy.

The Ministry of Corrections and Legal Assistance of Georgia and USAID, acting through the TPP, signed a Memorandum of Understanding to support efforts to strengthen TB control within the prison system in order to prevent the further spread of TB among the general population and reduce the number of all cases of TB in Georgia.

In line with the agreement, to build capacity of health care professionals employed by the penitentiary system, the TPP trained FPs, nurses and TB specialists from all prisons across Georgia. In total, 29 FPs (72% of FPs working in prisons) and 47 general practice nurses (85% of GPNs working in prisons) attended training in early TB detection and management, and 19 TB specialists (100% of TB specialists in prisons) in 3I's strategy. The project also supported the development of a stigma reduction campaign and provided communication materials, including calendars with photos of celebrities holding signs with messages showing their support for the fight against TB in Georgia and info leaflets.

5. Training for staff of Georgian Harm Reduction Network (GHRN) in “Tuberculosis prevention, early detection and Psychosocial Support”

Considering the importance of TB early detection and treatment compliance among IDUs, USAID Georgia TB Prevention Project planned to support the GHRN, and design and implement the training course for social workers, peer educators and community counselors working within the network to build their competencies in TB prevention, early detection, referral and long-term support.

Supported by the Global Fund, the GHRN, through ten harm reduction centers across Georgia is currently implementing HIV prevention project “Further increase of coverage and quality of preventive interventions targeted at MARPs – IDUs.” Twelve Voluntary Counseling Testing (VCT) consultants, ten regional coordinators, 38 social workers and nine laboratory technicians of GHRN have routine and direct contact with IDUs. They serve approximately 3500-4000 beneficiaries per month. GHRN staff is responsible for preventing HIV, hepatitis, and sexually transmitted diseases in IDUs. GHRN staff may face TB related problems daily; however, they lack knowledge and skills on TB prevention, detection and psycho-social support. TPP prepared a short-term training program to reduce this gap and improve counseling skills of GHRN staff on TB related topics. This module will be integrated into the GHRN's Peer Driven Intervention (PDI) educational program, which is now composed of eight modules and is delivered by GHRN staff to the program beneficiaries.

In total, 81 participants (38 in Tbilisi, 24 in Kutaisi and 19 in Zugdidi) were trained. Analysis of the pre- and post-tests results showed that all trainees have improved their results since pre-testing and their knowledge in specific issues discussed within the training program has been raised. The training received mostly positive feedback and was reflected in local media (See the links below).



<http://www.youtube.com/watch?v=CVPEH3qxLp4>

<http://www.psnews.ge/php/newsshow.php?lang=geo&t=42&uid=3272>

6. Train TB physicians in the use of Xpert MTB/RIF System for Rapid Diagnosis of Tuberculosis and Rifampicin Resistance

Earlier and improved TB case detection - including smear-negative disease often associated with HIV - as well as expanded capacity to diagnose multidrug-resistant tuberculosis (MDR TB) are global priorities for TB control. Based on WHO's recommendations Xpert MTB/RIF rapid test should be used as the initial diagnostic test in individuals suspected of MDR TB or HIV/TB (WHO strong recommendation) and may be used as a follow-on test to microscopy in settings where MDR TB and/or HIV is of lesser concern, especially in smear-negative specimens (recognizing major resource implications) (WHO conditional recommendation).

Usage of Xpert MTB/RIF in Georgia is still limited. With support of the FIND project, 4 Gene Xpert systems were set up: two at the central level in Tbilisi at the National Center for Tuberculosis and Lung Diseases, and another two in Batumi (Adjara region) and Kutaisi (Imereti region) in regional laboratories of the National Center for Disease Control and Public Health. From 2014 usage of Xpert MTB/RIF will be enhanced and with support of Global Fund, 12 GeneXpert machines will be established in all TB laboratories of Georgia. In order to promote effective utilization of this new technology, TPP conducted trainings for countrywide implementation and utilization of Xpert MTB/RIF test. The aim of the training course was to improve knowledge and skills of TB physicians necessary for adequate use of Xpert MTB/RIF algorithms, correct interpretation of test results, and standard management of TB cases diagnosed by Xpert MTB/RIF. On May 19-20 and July 27-28, 2013, one day (8 hours) training courses were delivered in 10 small groups of 10-12 trainees in Tbilisi, Batumi, Zugdidi and Kutaisi. In total 120 TB specialists were trained and provided with protocols that will help them to make an adequate decision on utilization of Xpert MTB/RIF rapid tests when appropriate.

7. Trained NCDCE Epidemiologists in tracing of TB contacts, ex-prisoners and patients lost to follow up

Based on WHO's recommendations, the identification of people who have been exposed to potentially infectious TB cases can be an efficient, targeted approach to intensified TB case finding and reduce TB transmission. Late identification of exposed individuals and poor adherence to a long-term treatment regimen are constant challenges for National TB Programs and significantly affect the treatment outcomes and epidemiological situation at individual and country levels. NCDCE in Georgia has recently assumed a responsibility over TB epi-surveillance. This role should be fulfilled through a cohort of epidemiologists, which will provide tracing of newly diagnosed TB patients' contacts, former prisoners, and patients defaulting from treatment.

In collaboration with NCDCE the TPP designed and implemented a training program to improve knowledge and skills of NCDCEs' Epidemiologists for effective epi-surveillance. In total, 153 epidemiologists were trained on newly developed protocols based on WHO recommendations.

8. Establishing Quality Improvement Collaboratives

A quality improvement collaborative is a structured approach to convening a group of similar healthcare organizations that share a common concern. The group works together for a defined period of time to implement best practices and support one another in making rapid, sustainable



changes. TPP served as a change agent to spur the adoption of quality improvement methods and promote evidence-based practice.

The Quality Improvement Collaborative model involves a series of meetings to learn about best practice in the area chosen, to discuss quality methods and change ideas, and to share their experiences of making changes in their local settings. After the first learning session and establishment of collaborative teams the TPP made a step forward. The TPP team developed the training package and conducted the second learning session focused on clinical audit as a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change and suggested key indicators of best practice based on the new TB management guideline. The new TB management guideline, its development methodology, key recommendations, and protocols were presented to the participants. The session also included overview and analysis of process related data collected by the regional coordinators.

During Year 2, TPP conducted learning sessions in Kutaisi, for Imereti region (on November 29, 2012 and March 28, 2013), Telavi, Kakheti region (April 29, 2013), in Zugdidi, Samegrelo-Zemo Svaneti Region (May 16, 2013), Batumi, Adjara and Guria regions (July 15, 2013) and in Tbilisi for Mtskheta-Mtianeti, Shida-Kartli and Kvemo-Kartli Imereti Regions (March 26, 27, 29, 2013). The sessions were attended by family physicians, TB specialists, nurses, managers, and public health officials. The learning session agenda included clinical audit as a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change and suggested key indicators of best practice based on the new TB management guideline. The new TB management guideline, its development methodology, key recommendations, and protocols were also presented to the participants.

Following the learning sessions, selected quality improvement teams supported by the regional coordinators started a clinical audit against the key quality indicators developed on the basis of National TB guideline recommendations. The indicators covered the most important steps of the TB care pathway: diagnosis, treatment and monitoring of sensitive and MDR patients. The audit findings will create the basis to analyze the current practice, opportunities, and targets for improvement.

9. Ongoing Support Activities to TB Professionals

TPP provided support for professional development of TB specialists through disseminating evidence-based information and providing opportunities for professional discussions and experience sharing.

During Year 2 TPP supported 3 journal club meetings and arranged a conference. Journal club meetings were devoted to discussion of materials of the 43rd Union World Conference on Lung Health “Driving sustainability through mutual responsibility,” pediatric TB, and risk factors associated with TB treatment default among M/XDR TB patients. The conference covered performance appraisals of PHC providers and pediatric TB guideline.

10. TPP’s Small Grants Program

Three organizations were selected within the framework of the first wave of the small grants program initiated for local non-governmental and civil organizations to encourage their involvement in improving quality of TB services and increasing availability of and demand for TB Treatment. Two of them, Georgia Nurses Association and Welfare Foundation, have completed their project



during the Year 2. The third organization, Partnership of Social Initiatives, will finalize the project in FY2014.

a) Georgia Nurses Association: Support of TB-service nurses to strengthen the quality of TB services in Georgia

The goal of the project was to strengthen the quality of TB services in Georgia by increasing the professionalization of nurses. The project accomplished four objectives: development of job description for TB services nurses, development of appropriate protocols, development of protocols and quality indicators, and training of TB nurses. The project achieved all objectives: a TB nurse job description was developed, 10 protocols elaborated and 83 nurses were trained. The GNA organized the closing conference to share the project achievements with its members and other stakeholders including MoLHSA, NCDC, and NCTBLD.

b) Welfare Foundation: Health NGO Coalition & Communities for Tuberculosis Prevention

The project had the following goals:

- To decrease TB treatment default rates through patient education and strengthening the referral system between NTP and primary healthcare units
- To improve healthcare seeking behavior in regards to TB through increased community awareness and an anti-stigma campaign
- To support timely TB diagnosis through strengthening of primary healthcare units in detecting and supporting TB treatment adherence.

The following activities were implemented during the project:

- Qualitative research has been carried out and operational assessment report on TB patient referral practice and Primary Care Providers specific needs in counseling for TB and presumptive TB patients and prepared;
- 6000 copies of informational materials aimed at adherence support have been printed and distributed;
- 3000 promotional materials aimed reducing TB related stigma have been printed and distributed;
- 30 TB patients-peer educators have been trained;
- 21 PHC providers have been trained;
- 24 NGOs, community peer-educators, and media representatives have been trained;
- 10 community based ACSM events implemented;

Additionally to the agreed plan, the Welfare Foundation team, in collaboration with National Center of Disease Control, has elaborated a new information brochure aimed at improving awareness of TB patient family members and close contacts as well as reducing TB related stigma.

c) Partnership of Social Initiatives: Improving TB Control by Removing Health System Barriers

The purpose of this grant program was to build and strengthen linkages between health care facilities providing TB care and communities through active outreach by demonstration of how to enhance the effectiveness and efficiency of TB control by removing Georgia's private health system barriers and to demonstrate a new long-term equitable and sustainable model for TB control. The project team conducted a survey on barriers to integration of TB services into the general health care system. More specifically, the survey aimed to identify how the governance, service organization, and procedures, including type and level of service organization, financing,



and provider-payment mechanisms practiced in the private health system models, create incentives and barriers that affect the delivery of quality TB service.

In order to improve populations' awareness and increase demand for TB services, the project formed a community coalition (CC) composed of community based organizations in Kakheti region and started Door to Door education campaign in Lagodekhi. Nine Consultants/Educators conducted 1350 consultations; in total, the consultants visited 2250 households. During the consultations, the CC member mini interview guide was used. Pamphlets were distributed by coalition members during Door to Door visits as well as delivered to other community centers, schools, pharmacy stores and other places within Lagodekhi district. During the reporting period up to 10000 pamphlets were distributed; in total up to 20000.

In collaboration with TPP the project team developed training/presentation materials and conducted training for teachers and schoolchildren at Public Schools. Key messages regarding tuberculosis signs and symptoms, diagnostics and TB treatment adherence were emphasized. Animations were also included for better perception.

Three organizations were selected within the framework of the second wave of small grants program and started implementation of corresponding projects in March 2013.

d) Georgian Phthisiologists and Pulmonologists Association: Improving early detection of suspected pulmonary and extra-pulmonary TB cases in public-private sector

The project aims to improve early detection of suspected pulmonary and extra-pulmonary TB cases in multi-profile medical facilities through:

- Supporting professional development of specialized health-care professionals (creating job-aids and protocols for TB differential diagnosis);
- Conducting relevant specialized trainings for health care professionals from different fields;
- Establishing strong linkages between NTP and specialized sector.

During this year GPPA:

- Elaborated the training materials, agendas, pre- and post-tests
- Elaborated the job-aids, protocols, and algorithms for pulmonary and extra-pulmonary presumptive TB cases diagnosis and further management of pulmonary and extra-pulmonary presumptive TB cases
- Conducted a series of trainings in order to improve knowledge of bordering frontline health care professionals in modern aspects of TB diagnosis and differential diagnosis and thus increase referral of suspected pulmonary and extra-pulmonary TB cases from public-private sector to TB services. In total 83 health care professionals from various disciplines (non TB specialists) have been trained.

e) The Center of Bioethics Studies and Culture (CBSC): Georgian Orthodox Church for TB Prevention

The overall goal of the proposed project is to reduce community transmission of TB. The CBSC team works with the Patriarchate of Georgia and targets representatives of eparchy and priests, parishes, internally displaced people, and newly released prisoners with TB awareness raising activities.

The project team has elaborated two types of posters and printed 500 copies of each, information brochure for general population - 2000 copies, information brochure for former prisoners - 5000



copies, information leaflet – 10000 copies. These materials focused on disease transmission and importance of treatment adherence. In addition, two video reels were developed and shot. Both of these reels were aimed at supporting patients and decreasing stigma. Video reels were broadcasted on three channels: Public Broadcaster, Ertulovneba and Imedi TV.

Meetings were held in Nekresi eparchy, Kvareli and Dubi Nunnery; in Stepantsminda eparchy, Stepantsminda, Dariali and Gergeti. They were attended by church representatives, parishioners, including former prisoners. Information was disseminated, collection of monastery and representatives of parishioners were checked and recommendations were given. In each eparchy, peer educators were selected on a voluntary basis. The representatives of the Eparchy expressed their willingness to serve as the peer educators and spread information about TB transmission and treatment in order to reduce the stigma in the society.

The medical examinations were provided in the following monasteries: Shavnabada, Mzovreti, Kintsvisi, Sapara, Rabati, Martvili, Inchkhuri, Ortashua, Dubi and Dariali with the aim of indentifying presumptive TB as early as possible

f) Georgian Health Promotion and Education Foundation: Conduct Intensive Information Campaign and Raise Awareness

The overall goal of the project is to raise awareness of TB patients, their family members and medical workers, as well as of general population regarding TB in Georgia.

Specific objectives of the project are:

- To elaborate information and promotion materials regarding TB
- To conduct information and awareness raising activities in 11 regions of Georgia. This will include training for journalists.

The following activities were implemented in accordance with the project plan:

- TV-program dedicated to the launch of the project on March 31, 2013. The TV program is available at the following link: <http://obieqtivi.net/tv1.php?id=11335>.
- Preparation and Publishing of Information Materials: leaflet for general population about TB (3000 copies); sticker with slogans (5000 copies); poster with slogans and 2014 calendar (1000 copies); scrolling stander with slogans (2 items); T-shirts with slogans (200 items); 1 social video and 1 audio clip, advocacy toolkit for NGOs, PPT presentations, curriculum and material for media-training have been developed
- TV-programs regarding TB issues.
- 2 TV programs dedicated to the issues of TB were organized together with the project expert, Mr. Kakha Vacharadze. The TV programs are available at the following links:
 - 19 May, 2013: <http://obieqtivi.net/tv1.php?id=11992>
 - 16 June, 2013: <http://obieqtivi.net/tv1.php?id=12427>
- On 21 April, 2013 a special program dedicated to TB and stigma issues was organized with participation of TB communication specialist, Dr. Eka Sanikidze. The TV program is available at <http://obieqtivi.net/tv1.php?id=11664>.
- Trainings were conducted for journalists, NGOs, Public health offices, Universities and other educational facilities in Tbilisi and 10 regions of Georgia.
- Street actions were arranged in Kutaisi, Batumi, Zugdidi, Ambrolauri and Ozurget with participation of students and pupils (totally about 60-70 persons) who distributed information materials (leaflets, posters and stickers) among public.



Annex X.II summarizes key focus areas and achievements within completed or ongoing small grants programs.

11. Survey of risk factors associated with loss of MDR TB patients to treatment

Institute of Social Studies and Analysis subcontracted by TPP finalized a survey to identify risk factors associated with TB treatment default among M/XDR TB patients, determine long-term outcomes of treatment default.

In order to meet study objectives the survey team utilized qualitative (desk research, focus groups) and quantitative (survey) methods of social research. Before the quantitative survey, the researchers conducted Focus Groups in order to receive valid survey indicators and get materials for the analytical report. The quantitative survey consisted of several stages: sampling, survey tool design, pre-testing of the questionnaire, field staff training, fieldwork, and data entry/analysis.

The survey revealed that risk-factors for the default from M/XDR TB treatment are mainly related to interrelated psycho-social and socio-economic factors. The risk-factors for occurrence of loss to follow up include depression, on the one hand, and socio-economic and systemic problems, on the other hand, with the latter closely interlinked with the former factor. Specifically, the results demonstrated the following: 1. Respondents are not adequately informed about some aspects of M/XDR TB treatment; 2. The main reason for default from treatment is related to medication side effects and the treatment regimen; 3. Respondents pointed at systemic problems including inefficient management, deficiencies in the voucher system, poor medication quality, an unsatisfactory relationship between the health care staff and the patient, and the inaccessibility/lack of some M/XDR TB treatment components (such as adequate numbers of social workers, psychologists, consultants for compliance with treatment, etc). 4. Stigmatization of the patient by community, family members, and even medical personnel.

The survey findings will be used to inform National TB Program in Georgia, promote effective functioning of DOTS and DOTS Plus strategies, and reduce public health risks related to M/XDR TB infection spread among the society (mainly resulted in treatment default).

12. Health Management Information System

Since 2011, the MoLHSA, in close collaboration with the USAID Health System Strengthening Project (HSSP), team is developing a novel and quite innovative National Health Management Information System (HMIS) that will ensure electronic data exchange among MoLHSA, insurance companies, medical service providers, and patients. This activity is aimed at developing the cooperative system for supporting government, population, and all stakeholders involved in the health care system, in order to receive all needed information quickly and timely and respond adequately.

The TPP in collaboration with USAID/HSSP has developed an electronic TB Health Information System module to support adequate programmatic data collection and analyses to inform the national program planning and policymaking. The TB software package, including five interlinked parts such as case registration, treatment monitoring, laboratory findings, pharmacy, and statistics has been developed and will be field tested in October-December 2013.

13. Strengthening regulatory framework for TB Control in Georgia

Health legislation is a proven, effective tool in implementing public health goals. It is a statement of the importance society places on national health development goals which include the control of communicable diseases. Health legislation, health policy, and public health programs are



interlocking elements of national health development. Legislation and regulations made pursuant to the law give clear definition of duties and responsibilities at all levels and make provision for the human, technical, and financial resources that are needed. They are necessary measures to support or make operational the various components of a TB control strategy.

WHO recommends having in place up-to-date legislation on communicable disease control and, on the basis of that legislation, to adopt regulations that apply the principles and provisions of that legislation to TB control. The legislation and regulations together serve to support and sustain a dedicated public health strategy for TB control exemplified by DOTS.

TPP has supported the Parliamentary Committee for Health and Social Issues in its efforts aimed at introducing effective policies and strengthening legislative framework for adequate TB control. The working group established by TPP has conducted a situation analysis concerning TB National response related legislation and identified the major gaps to be addressed by the regulatory framework. The major gaps identified are as follow:

1. The Georgian Law on Public Health includes general provisions on isolation and quarantine of individuals with or exposed to communicable diseases. The law is not clear about the implementation mechanisms and responsibilities. Therefore, the application of the isolation measures to someone with TB when absolutely necessary can be controversial;
2. Infection control legislation is limited to environmental measures and does not mandate implementation of administrative and personal protection measures;
3. The Georgian Legislation does not define the structure or entity responsible for organization and coordination of the National TB response;
4. The legislative framework of TB lab diagnostics (including national standards, laboratory standards, quality assurance tools) is very deficient;
5. The regulatory system to ensure high quality TB care is very weak. Clinical practice guidelines although available, are not always implemented. There is no system in place to monitor providers' performance and quickly recognize and address mal-practice.
6. Lack of drug prescription regulations make anti TB first line drugs easily available for patients. This encourages self-treatment and contributes towards developing drug resistant form of the disease.
7. Professional competencies of many medical specialists (e.g. infectious diseases, internal medicine, pediatrics) do not include TB related skills and knowledge, which prevents them from addressing TB-related problems and causes delay in diagnosis and treatment, particularly for those with extra-pulmonary TB.
8. Relevant regulations should be in place to strengthen coordination between MoLHSA and MCLA to ensure timely enrollment of former prisoners into the National TB Program.

The gaps will be discussed with all TB stakeholders in October 2013. The recommendations and draft legal documents will be available by December 2013.



C. Objective 3: Provide Limited Assistance to Recently Established Private Treatment Sites Nationwide in Updating Physical Infrastructure to meet TB Best Standards and to Improve Infection Control

The systemic changes to the delivery of TB and MDR TB services posed considerable challenges to managers of private facilities, health providers, and patients. Considering the need for adequate air flow to avoid nosocomial transmission of TB, TPP identified 30 clinics (which satisfied other criteria for physical infrastructure, e.g. isolated location, good working condition, and installment of new systems was technically feasible) in which exhaust ventilation equipment was installed. The facility staff was trained in adequate utilization and maintenance of the ventilation equipment in order to meet infection control requirements.

All construction activities were performed in compliance with USAID environmental compliance regulations and procedures. The TPP regional coordinators have conducted the monitoring for mitigation of environmental impact during installation of ventilation systems in the above mentioned facilities. All safety measures to mitigate environmental impact have been provided at each facility properly and according to safety rules; environmental review and assessment checklists have been filled out respectively.

Some private clinics used TPP ventilation standards and installed similar systems in their facilities, which were under construction last year and because of this were left beyond the TPP coverage. TPP will work with MoLHSA and private facility owners on developing effective strategies for infrastructure improvement including air flow control.

The construction companies, with support of TPP regional coordinators, provided training to the staff of 30 medical facilities where the ventilation systems have been installed. The trainings were attended by the TB specialists, nurses, and facility managers and focused on the infection control measures and adequate maintenance of the provided equipment.

IV. Best Practices/Success Stories

a. Strengthening NCDC capacity for improved contact tracing

The TPP team has established an effective collaboration with the NCDC team aimed at strengthening TB epi-surveillance system. The team, composed of NCDC and TPP staff members elaborated the contact tracing protocols, designed the training course and conducted training for 150 NCDC epidemiologists nationwide. NCDC has recently been selected as the principal recipient of the Global Fund funding in Georgia. In addition to its regular TB related functions, this new role will require extensive efforts to ensure successful implementation of GF TB Project activities. In these circumstances, NCDC staff capacity-building seems even more important. TPP plans to extend the collaboration with NCDC in various directions including introducing m-health solutions for tracing MDR TB patients and former prisoners; facilitating joint meetings and conferences for all TB stakeholders and conducting operational surveys as planned by the 2013-2015 National TB Strategy.

b. Introducing innovative approaches to professional capacity building

The TPP developed the first online module in Georgian language for health professionals. TPP received very positive feedback from MoLHSA, TSMU, NCTBLD, schools of public health and private providers' networks. Availability of the online module seems a very good way for busy practitioners to take the course at their convenience.



c. Implementation of small grants programs

Two small grants projects, implemented by the Georgian Nurses Association and Welfare Foundation have been successfully implemented. Both projects met their objectives and in addition built capacity and promoted visibility and recognition of the implementing organizations.

Civil Society Organizations (CSOs) play a crucial role in implementing community-based TB activities that are essential for accelerating global progress towards key TB targets. Therefore, the small grants program emphasized building capacity of nongovernmental, faith-based, community-based, and patient-based organizations as well as professional associations in the area of TB care nationwide. Their capacity to function in difficult-to-reach areas increases the program coverage and creates the opportunity for early TB case detection and treatment adherence.

d. Collaboration with the GF TB Project

The TPP team was actively involved in development of GF TB phase two proposal. The proposal was elaborated in line with the National TB Strategy for 2013-2015. The GF project activities are well coordinated with the TPP plans without any potential areas for overlapping or duplication of efforts. Due to limited funding, the GF project will not continue professional development activities for TB and primary care specialists. The TPP, building on its two-year experience, can expand learning opportunities to various audiences. The TPP team will employ the most efficient and effective capacity building strategies to ensure wider coverage of health professionals involved in TB care.

V. Challenges

The key challenge during implementation was uncertainty regarding the government entity responsible for the National TB response. Despite extensive stakeholder consultations on defining the structure of the National TB Program with clearly assigned roles to different parties for various TB control functions, the lead agency responsible for overall oversight and governance has not been designated by the GoG. Delay in approval of the new TB State program, which defines roles and functions of all parties involved in TB service delivery, hampered some activities. For instance TPP sub-grantee Partnership for Social Initiative had to redesign the project plan and postpone activities (e.g. strengthening governance of local hospitals to improve quality of TB services) directly related to the content of a new program.

VI. Monitoring and Progress against Indicators

Project monitoring was provided to track performance against key input, output, and outcome indicators as defined by the Project Monitoring Plan. The TB project team conducted ongoing monitoring and assessments of all activities implemented by the project staff or subcontractor organizations to: (1) identify project activities that are progressing as planned and should be continued; (2) introduce corrections to activities that are not progressing as planned; and (3) detect interventions that needed modification to produce desired impact.

The TB project team produced monthly, quarterly, and annual reports highlighting achievements on various indicators. These reports/vignettes are stored in the PMIS database to allow rapid retrieval for reports and presentations.

As presented in table 1 most of the targets were achieved. However, due to political, technical and administrative barriers no or insignificant progress was observed against the following indicators:

- The dramatic changes in health care financing policies (shifting back from the private health insurance to the state operated universal health care financing schemes) made it impossible to produce the technical report with recommendations and practical tools to integrating TB case



detection and referral services by PCPs into the standard benefit packages of private health insurance schemes.

- Significant changes were observed in organization of TB diagnostic services in FY2013. This transition did not allow to focus at developing internal quality assurance systems and procedures. Therefore, this activity has been postponed until the reorganization of TB laboratory services is completed and roles and responsibilities of all involved parties are clearly defined.
- Contact screening function was split between TB specialists and epidemiologists without clear guidelines and training thus hampering increase in number of screened contacts. Following the final definition of functions, TPP conducted training of epidemiologists that will be reflected on the screening indicator in the next years.
- A substantial decrease in TB case notification rate was observed in FY2013. Considering the trend before 2010, five percent annual increase was anticipated against this indicator. This decline coincides with the reorganization of the TB laboratory network (reducing number of TB microscopy labs, changes in the sputum transportation scheme, delay in sputum transportation from TB sites to microscopy labs). The above mentioned problems were resolved by the end of FY2013. Therefore, improved case notification should be anticipated in FY2014. The TB Prevention Project efforts aimed at supporting capacity building of primary care providers and NCDC epidemiologists in active case finding will also contribute towards achieving the planned targets.

Table 1: Illustrative Performance Monitoring Plan

Objective 1. Improve early detection of suspected TB cases (early diagnostics) in general health facilities

Output Indicator

Indicator	Data Source	Frequency	Year 2 Target	Year 2 Actual
1.1. Train primary health care doctors, nurses and other general health staff to recognize symptoms and test suspected cases (training and support of PCPs)				
# of management improvement collaborative meetings	Project Report	Quarterly	4	3
# of service delivery improvement collaboratives formed at regional levels	Project Report	Quarterly	3	3
# of regional service delivery improvement collaborative meetings	Project Report	Quarterly	28	30
# of service delivery improvement teams formed at facility levels	Project Report	Semi-Annual	70	70
# of TB training modules (to Identify presumptive TB in the early stage of disease) for family physicians developed/revised	Project Report	Annually	1	1
# of TB training modules (to Identify presumptive TB in the early stage of disease) for general practice nurses developed/revised	Project Report	Annually	1	1
# of Family doctors trained in identification of presumptive TB in the early stage of disease	Project Report	Quarterly	300	301
# of General nurses trained in identification of presumptive TB in the early stage of disease	Project Report	Quarterly	300	307



# performance appraisal visits conducted to family physicians and general practice nurses	Project Report	Annually	350	324
1.2. Ensure use of a standard TB case detection module in all pre- and in-service training curricula for general practitioners				
# of consultative meetings held with MoE, Tbilisi State Medical University, professional associations and other key stakeholders to review/update TB case detection module in pre-and in-service training curricula for general practitioners	Project Report	Quarterly	4	4
# of teachers retrained on new topics/methods of the TB case detection module in pre-and in-service training curricula for general practitioners (stratified by pre-and in-service trainings)	Project Report	Quarterly	75	24
# of Distance-learning courses and innovative approaches to improve attendance to TB training modules and rotations are developed	Project Report	Annually	2	2
1.3. Assist in the creation of a national strategy that encourages general practitioners to identify and diagnose suspected TB cases in general health facilities for further referral to the NTP				
# of well-performed PHC teams (family doctors and nurses) participated in workshops and capacity building activities at Regional TB Training Center in Georgia	Project Report	Annually	20	0
# of CDs with new literature, web-based and case-based modules for PCPs (to support them to refer presumptive TB cases to TB specialists) are developed and distributed to health care facilities	Project Report	Annually	2000	2000
# of Paper bulletins, massaged pens, mugs, calendars and etc for PCPs (to support them to refer presumptive TB cases to TB specialists) developed and distributed to health care facilities	Project Report	Annually	1000 paper bulletins 1000 calendars	1000 job aids, 2000 TB case brochures, 1000 Pediatric TB calendars, 500 celebrity calendars
# of meetings conducted with key stakeholders (MoLHSA, HSSP, Private Insurance Companies, Georgian Insurance Association, Service Providers and etc) to integrating TB case detection and referral services by PCPs into the standard benefit packages of private health insurance schemes	Project Report	Quarterly	4	4
Technical report with recommendations and practical tools to integrating TB case detection and referral services by PCPs into the standard benefit packages of private health insurance schemes is developed and disseminated	Project Report	Annually	The report produced	Not Met
1.4. Develop information materials (brochures and posters) and public service announcements (PSA) to educate the public on the importance of detecting early signs of TB				
KAP survey conducted	Survey report	Annually		
# of TV, radio and web-based campaigns and club discussions conducted to inform the general public about the early signs of TB and available resources	Project Report	Quarterly	4	4
# of Printed materials distributed to the general public in common areas such as banks, grocery stores, bars and restaurants	Project Report	Quarterly	TBD	2000 info brochures, 3000 smart-cards, 1000 leaflets,
1.5. Reduce the stigma of TB through PSAs and informational materials				
# of current and former TB patients trained to deliver positive messages to the public about TB diagnosis and treatment.	Project Report	Annually	20	30



# of local leaders, cured TB patients delivering TB stigma reduction massages	Project Report		TBD	36
# of PSA and community events held to deliver stigma-reduction and awareness building communication messages	Project Report	Annually	12	13
# of brochures, posters, "I am The Best" T-shirts, mobile massages, TV, radio and web-based information distributed to deliver stigma-reduction and awareness building communication massages	Project Report	Annually	5000	350 T-shirts, 100 scarves, 2 banners, 200 posters, 1000 flyers, 3000 adherence support brochures, 3000 stigma reduction brochures, 3000 contact info brochures, 5000 brochures for prisoners, 1000 postcards, 10000 leaflet, 5000 stickers, 1000 posters, 5 video reels
Outcome/Impact Indicator				
# of patients with presumptive TB referred from primary care providers for TB diagnosis (stratified by length of TB suspected symptoms, by regions/districts)	Multiple Sources	Annually	20% increase at baseline (average 49 per month in 2012)	Average: Georgia - 133 per month
% of TB+ cases in total number of suspected TB patients referred from primary care providers	Multiple Sources	Annually	20% increase at baseline (average 4% in 2012)	Georgia - average 11%
Case notification rate in new sputum smear positive pulmonary TB cases per 100,000 population nationally	TB surveillance database (2010 baseline 48.6)	Annually	50	37*
#/% of PHC teams which refer patients with suspected TB symptoms to TB services within two weeks of onset of symptoms	Multiple Sources	Annually	20% increase at baseline	23 PHC teams per month on average (Georgia)
Objective 2: Strengthen the quality of full implementation of DOTS and DOTS plus nationwide				
Output Indicator				
Indicator	Data Source	Frequency	Year 1 Target	Year 1 Actual
2.1. Expand geographically to cover nationwide quality DOTS and DOTS plus services through technical assistance and training of medical personnel and supportive supervision				



# of outpatient TB service providers evaluated through supportive supervision visits	Project Report	Annually	200	280
Performance appraisal report available	Technical Report	Annually	Yes	Yes
# of diagnostic facility staff trained in QA issues	Project Report	Quarterly	25	0
# of DQA visits to facilities to assess the quality of data by indicators and validate reported information across different levels of the health system	Project Report	Annually	280	280
# of TB patients enrolled in text messaging service for receiving adherence reminders	Project Report	Annually	TBD	0
# of TB patients counseled after they leave penitentiary system	Project Report	Annually	TBD	
2.2. Provide technical support to NTP in training, management, infection control, monitoring and evaluation, policy and strategy formulation, development of the TB strategic plan (2013 – 2015), and operations research				
# of national and international workshops conducted by the NTP trainers with support of the project	Project Report	Annually	2	4
# of existing IC policies and guidelines adapted	Technical Report	Annually	TBD	1
2.3. Ensure an appropriate national TB policy and program response in the evolving Georgian health system reform				
# of consultative meetings on legal and policy issues organized by the project that will be attended by the CCM members and other stakeholders	Project Report	Annually	4	4
Technical assistance provided to ensure that regulatory tools are put in place to support national decision makers in health to ensure future availability of case detection and DOT services in private health care settings	Project Report	Annually	TBD	2
2.4. Support to local NGOs with known success in assisting patients to adhere and complete MDR/XDR treatment				
# of NGO representatives trained on TB related policy, proposal writing, financial management, strategic and operational planning.	Project Report	Annually	50	24
# of small grants programs implemented by NGOs	Project Report	Annually	4	3
# of social workers conducted field experience in NTP and local NGOs delivering community support services for HIV positive and TB patients	Project Report	Annually	5	81 social workers trained
2.5 Assist the professional association of TB specialists				
# of grant writing workshops conducted for members of TB professional associations	Project Report	Annually	1	1
Annual award ceremony: the “Best TB specialist” and the “Best PHC Site” conducted	Project Report	Annually	1	1
# of “journal club” meetings for members of the National Association of TB Specialists	Project Report	Quarterly	4	4
# of association members attending regional conferences	Project Report	Annually	4	0
# of small grants programs implemented by various professional associations in carrying out TB education programs for its members	Project Report	Annually	2	2
Outcome/Impact Indicator				
Treatment success rate for new smear positive TB cases: number and percentage of new smear-positive TB cases successfully treated (cured + treatment completed) to the total number of new smear-positive TB cases treated in a given year, %	TB surveillance database (2009 baseline 75%)	Annually	80%	76%



Treatment success rate of MDR TB patients: number of patients who were cured or completed Category IV treatment (% of the total number of patients in the same registration cohort)	TB surveillance database (2008 baseline 54.5%)	Annually	55%	52%
Interim treatment success rate of MDR TB patients: number of patients who are smear and culture negative at 6 months after start of treatment (% of the total number of patients in the same registration cohort)	TB surveillance database (2008 baseline 55%)	Annually	65%	TBD
Objective 3: Assistance to recently established private treatment sites nationwide in updating physical infrastructure to meet TB best practice standards, and to improve infection control				
Output Indicator				
Recommendations elaborated for adjusting physical infrastructure of health facilities	Facility assessment report	Annually		
Infectious control standards for different types of facilities elaborated	Project reports	Annually		
# of health facilities updated and equipped	Project reports	Annually	36	ventilation systems installed at 30
# of staff trained on effective IC measures	Project reports	Annually	200	130
Impact Indicator				
# and % of TB patients accessing key services in each clinic- screening, diagnosis, treatment	Project reports	Annually		
Screening			20% increase at baseline (average 6.6 contacts screened per month per clinic)	Average 6.6 contacts screened per month per clinic
Diagnosis			20% increase at baseline (19.5 per month per clinic)	Average 23.5 patients per month per clinic
Treatment			Average 39 patients per month per clinic	Average 42 patients per month per clinic

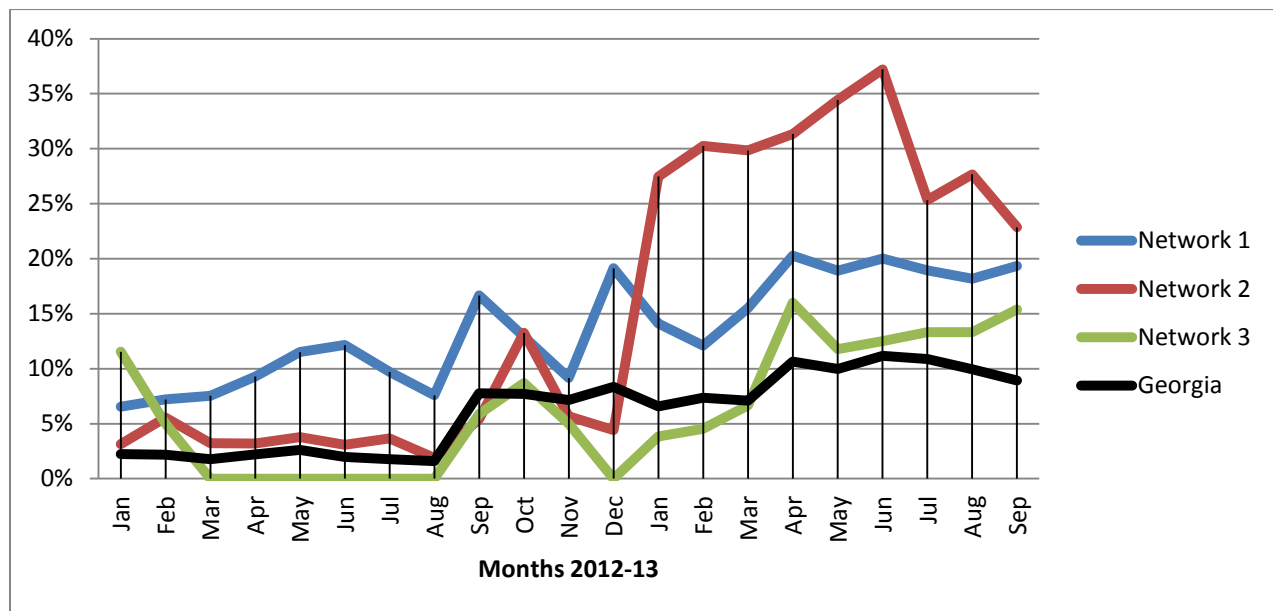
* 37% corresponds the calendar year 2013. This datum was taken for comparison with baseline indicator of calendar year 2010. Case notification rate in new sputum smear positive pulmonary TB cases per 100,000 population for fiscal year 2013 amounts to 30%.



A. Facility level data analysis

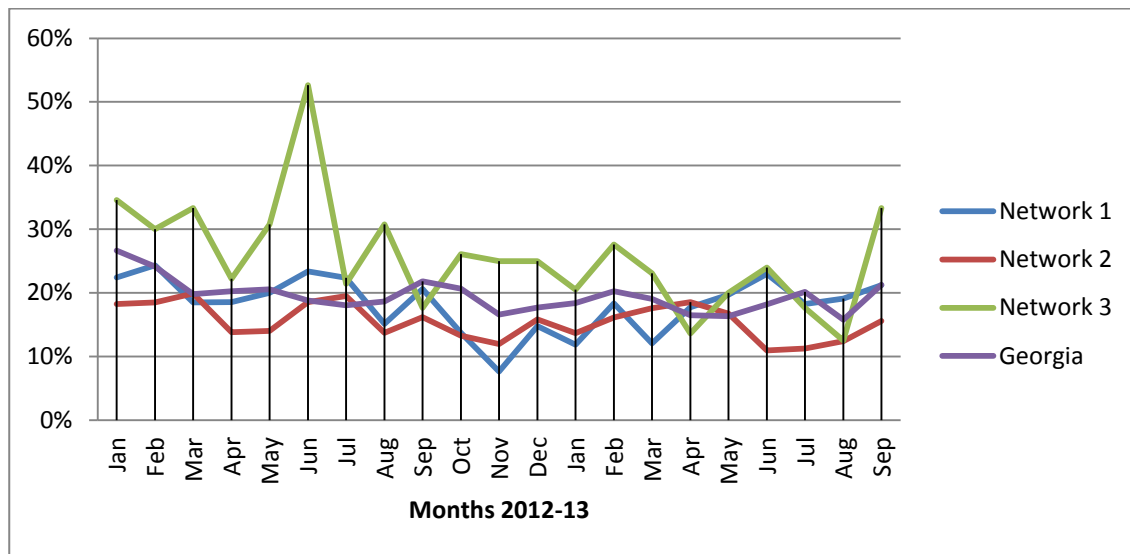
TPP team collected facility level data at all 65 outpatient TB sites in Georgia to monitor general trends and changes in practices that may be attributable to the project interventions. A particular area of interest is a primary care referral rate of presumptive TB patients to specialized services. The data showed that nationwide the share of patients referred to TB specialists from PHC services increased from 2% to 10%. This trend characterized all networks, but to a different degree (see Figure 1). The growth rate was especially significant in regions where PHC providers were trained in early TB detection. The proportion of presumptive TB cases referred from PHCs in the regions covered with the training program has increased from average 8% in 2012 to 19% in 2013 in Adjara; from average 1% in 2012 to 3% Samegrelo and from average 7% in 2012 to 22% in 2013 Mtskheta-Mtianeti—illustrating the positive impact of this intervention on improving coordination between primary and specialized services. This increase is also associated with the quality collaborative efforts that covered the whole country.

Figure 1: Proportion of presumptive TB referred from PHC level to TB services



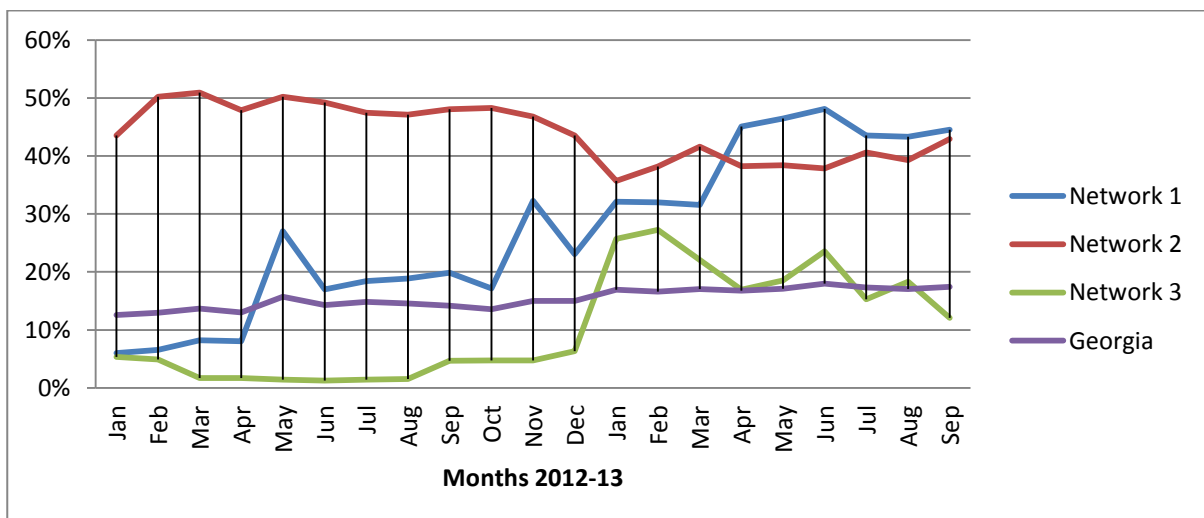
The proportion of confirmed TB cases among presumptive TB cases decreased from 27% to 21% with significant monthly fluctuations in different networks. The decrease in the share of confirmed cases is supportive of the idea that some presumptive TB cases are sent to TB specialists at an earlier stage, however the fluctuation indicates an inconsistency of practices (see Figure 2).

Figure 2: Proportion of confirmed TB cases among presumptive TB cases



PHC involvement in TB care also increased at a treatment stage. Overall share of TB patients who receive DOT at PHC level increased from 13% to 17%. The proportion of community level DOT is especially marked in rural areas and among patients treated at TB facilities that belong to networks as these networks also contract PHC facilities. Primary healthcare providers' involvement in DOT is less significant in regions where access to PHC services in general is limited. Tbilisi is the only city in the country where DOT is provided exclusively by specialized TB services (see Figure 3)

Figure 3: Proportion of patients who receive DOT at PHC level



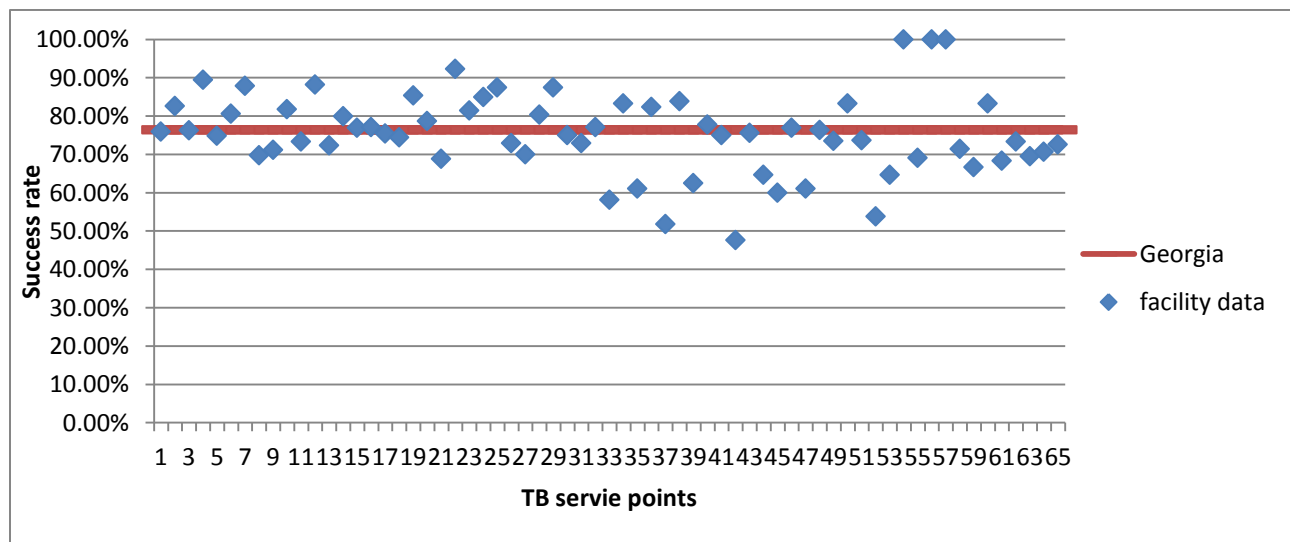


B. Baseline outcome indicators

TPP initiated the collection of baseline outcome indicators at the facility level. A cohort of patients enrolled in treatment in 2011 was selected to sensitive cases and a cohort enrolled in 2010 for MDR TB patients. Outcome definitions correspond to the WHO classification for sensitive patients: cured, completed, failure, defaulted, transferred out, died, moved to IV category and for MDR patients: cured, completed, failure, defaulted, transferred out, died.

Based on currently available sensitive patients treatment outcome data it may be concluded that success rate (cured + completed) in different facilities is mostly close to the national average of 76.4%. There are, however, two sites with a success rate less than 60% and three with greater than 85%. It should be noted that the success rate in smaller, rural areas is better (74%) compared to TB sites in relatively large cities (70%) (See Figure 4).

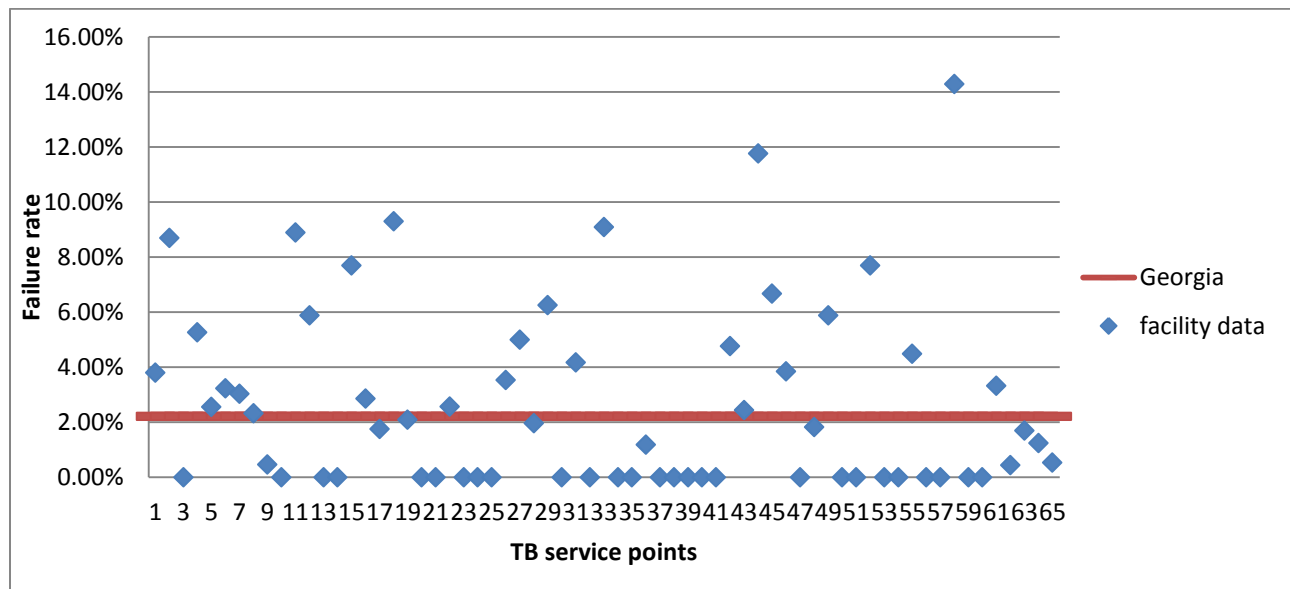
Figure 4: Treatment success rate in 2011 drug sensitive cohort



Treatment failure rate is generally low like the country average of 2.2%. There is significant number of facilities with 0 treatment failure. But in certain facilities treatment failure exceeds 10% and even reaches 14% (see Figure 5).

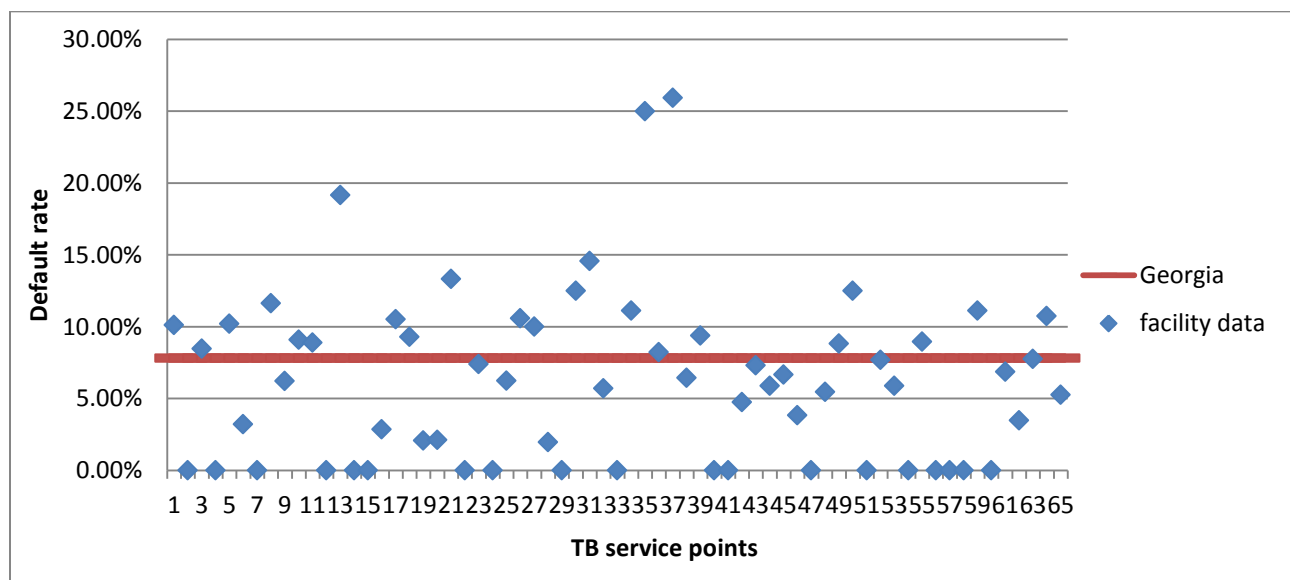


Figure 5: Treatment failure rate in 2011 drug sensitive cohort



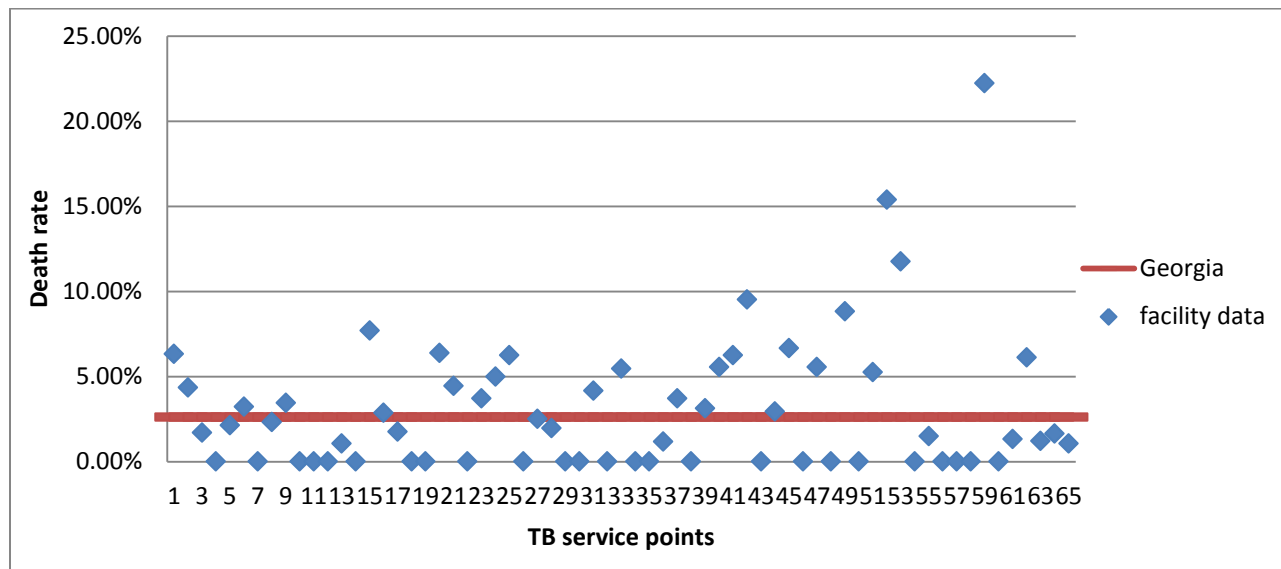
More significant variance is demonstrated in regards with default from treatment. Some facilities fall within the range of the national average 7.8%, however there is equal number of TB sites where lost to follow up is 0% and significant number exceeding the national average, including the exceptional cases over 25% (see Figure 6).

Figure 6: Lost to follow up in 2011 drug sensitive cohort



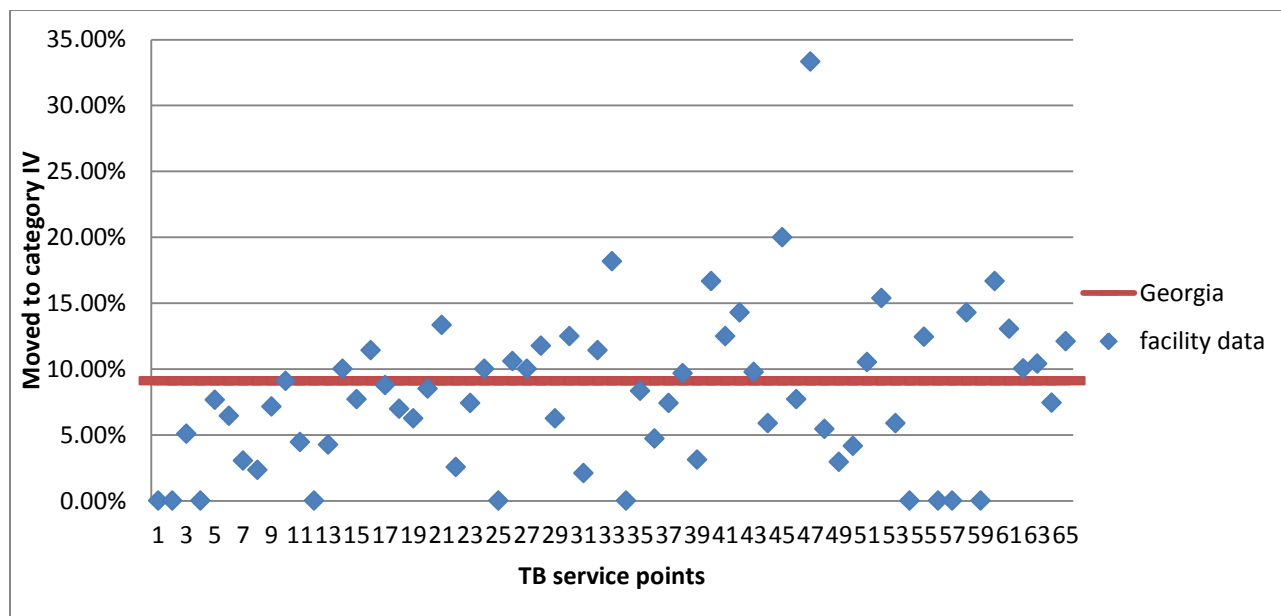
In the majority of facilities visited the death rate is below the national average of 2.6% with exceptional cases over 15% (see Figure 7).

Figure 7: Death rate in 2011 drug sensitive cohort



Percentage of patients who developed drug resistance is mostly around the national average of 9.1%, although in certain TB sites this rate is exceeded twice and even three times. It should also be mentioned that this indicator in district level settings (7.45%) is better compared to regional or central TB sites (9.76%) (see Figure 8).

Figure 8: Percentage of 2011 drug sensitive patients, who moved to category IV

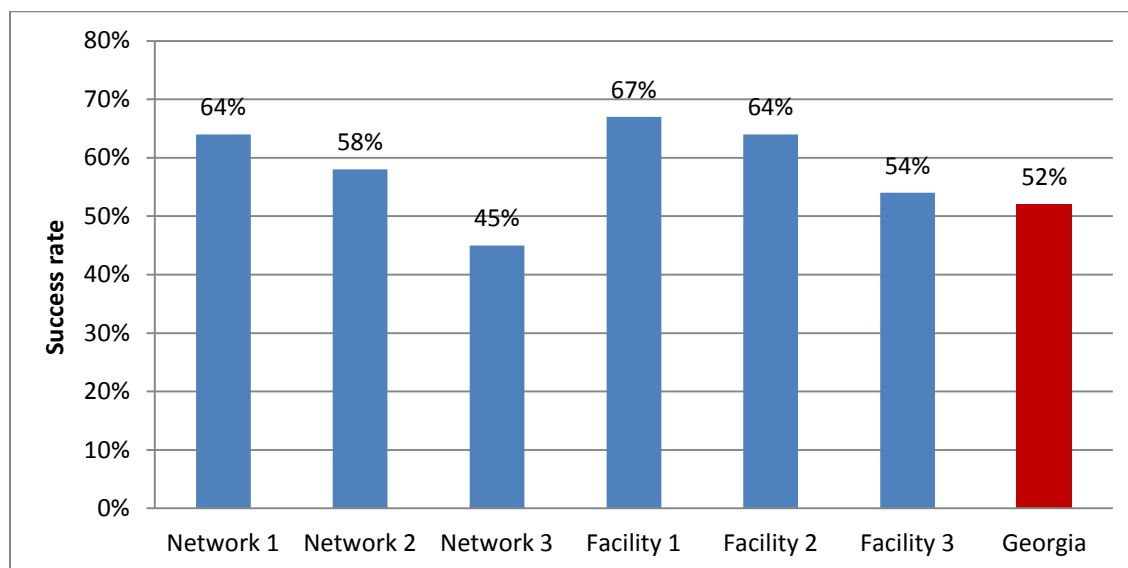


The limited number of patients with MDR TB in the majority of facilities (less than 5) do not allow for outcome data analysis at the facility level. Therefore, the outcome data were grouped by the



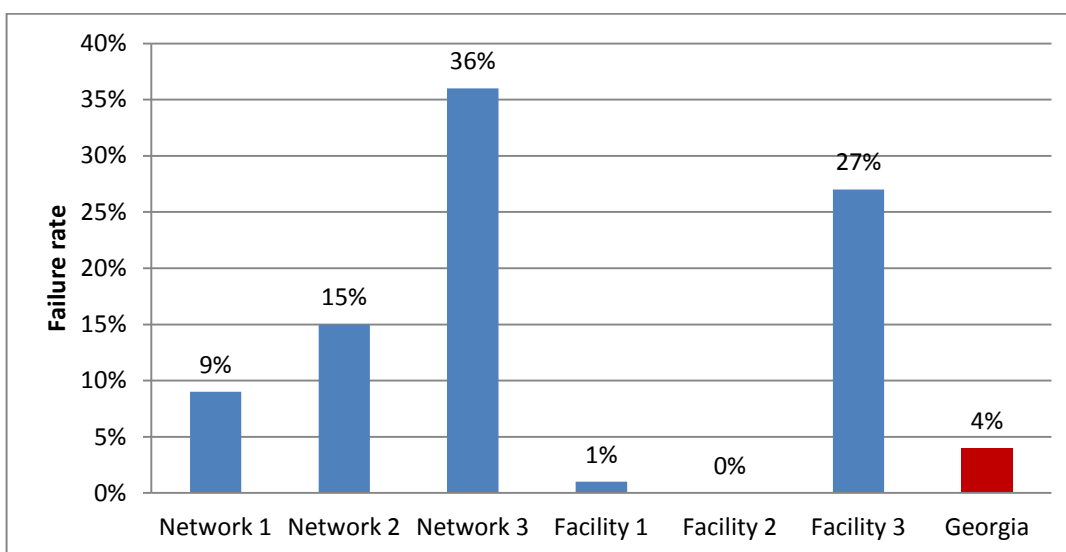
provider networks and compared with three relatively large facilities. The success rate fluctuates around the national average of 52% from 45% to 67% (see Figure 9).

Figure 9: Treatment success rate in 2010 MDR cohort



Similar to sensitive patients, treatment failure and default rate demonstrate significant variability among networks and facilities. Failure rate ranges from 0 to 36% with similar differences among central and district facilities (see Figure 10).

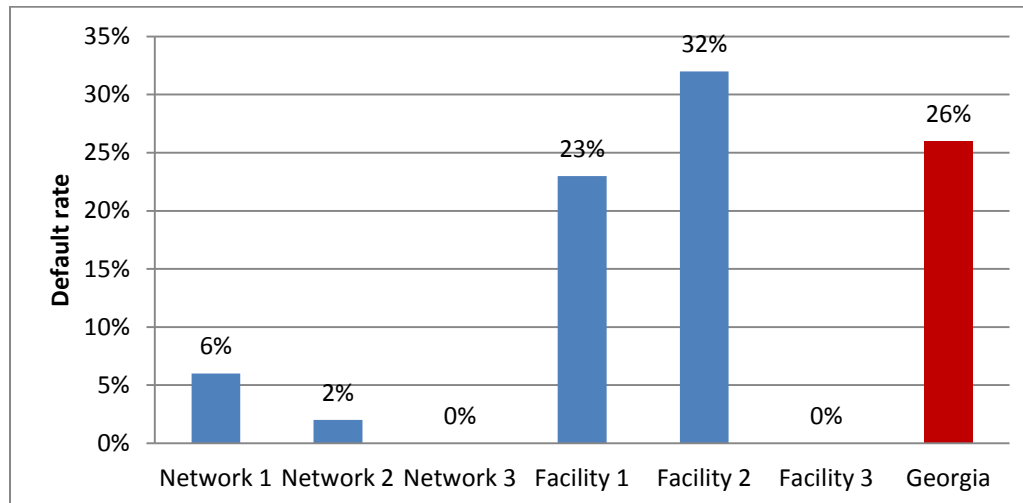
Figure 10: Treatment failure rate in 2010 MDR cohort





Lost to follow up rate ranges from 0 to 32%, with a national average of 26%. The rate is higher in central referral facilities. This may be related to the treatment of the most severe cases requiring longer duration and a more aggressive regimen (see Figure 11).

Figure 11: Lost to follow up in 2010 MDR cohort



Comparison of facility level or network level outcome data disaggregated by gender did not reveal any trends specifically related to gender, although better treatment outcomes are observed among females. This trend is not consistent across facilities. See data in tables below.

Table 2: Outcomes of patients with sensitive TB enrolled in treatment in 2011 by gender

Outcomes	Network 1	Network 2	Network 3
Treatment success rate	73%	78%	78%
F	70%	83%	86%
M	75%	76%	74%
Cured	30%	32%	32%
F	23%	26%	29%
M	33%	35%	34%
Completed	43%	46%	46%
F	47%	58%	57%
M	41%	41%	40%
Failure	4%	2%	1%
F	3%	1%	0%
M	4%	2%	1%
Default	8%	6%	9%
F	6%	5%	12%
M	9%	7%	8%
Died	2%	2%	2%
F	5%	1%	0%
M	1%	3%	3%



Moved to cat IV	8%	6%	6%
F	10%	5%	2%
M	7%	6%	8%

Table 3: Outcomes of MDR TB patients enrolled in treatment in 2010 by gender

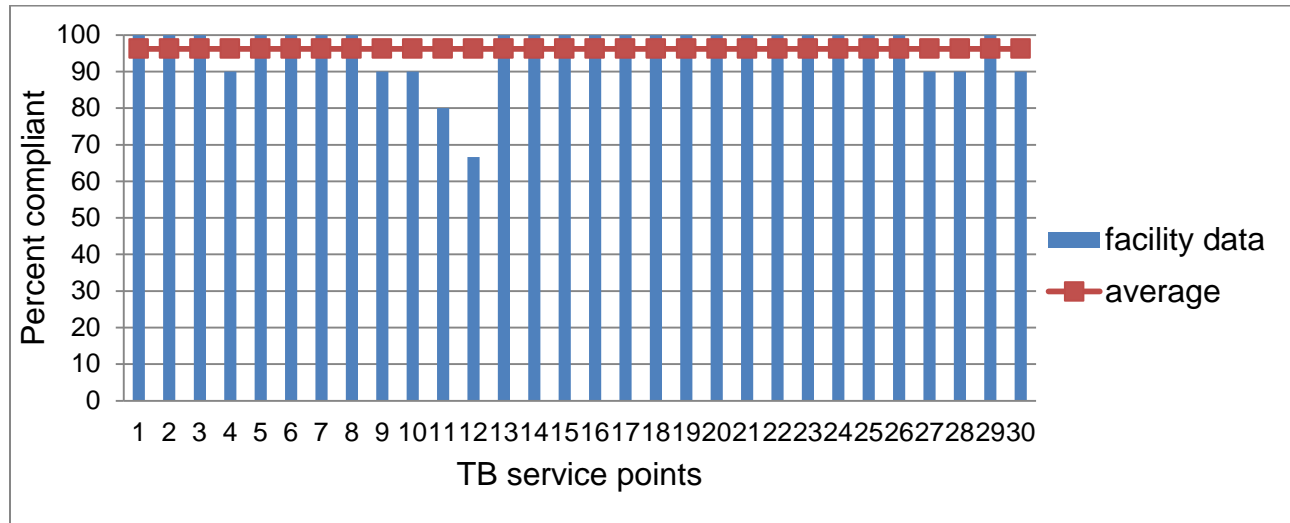
Outcomes	Network 1	Network 2	Network 3	Facility 1	Facility 2	Facility 3
Treatment success rate	64%	58%	45%	67%	64%	54%
F	58%	50%	60%	70%	75%	67%
M	67%	60%	33%	66%	57%	52%
Cured	30%	38%	45%	25%	23%	23%
F	25%	50%	60%	24%	25%	33%
M	33%	36%	33%	26%	21%	22%
Completed	33%	25%	0%	42%	41%	31%
F	33%	25%	0%	46%	50%	33%
M	33%	24%	0%	41%	36%	30%
Failure	9%	15%	36%	1%	0%	27%
F	0%	0%	20%	2%	0%	33%
M	14%	18%	50%	0%	0%	26%
Default	6%	2%	0%	23%	32%	0%
F	0%	0%	0%	24%	13%	0%
M	10%	2%	0%	23%	43%	0%
Died	9%	11%	18%	2%	5%	15%
F	17%	25%	20%	2%	13%	0%
M	5%	9%	17%	2%	0%	17%

C. Baseline TB Care process indicators

TPP collected data from 30 TB service points on TB care process related indicators to establish the baseline and track progress over time.

In general, compliance with quality standards exceeded 80-90%, and in some facilities reached 100% of sample patients, who enrolled in treatment in 2012. On average diagnostic standard was met in 96% of cases. 73% of facilities completely observed the diagnostic requirements for all patients. In the rest of cases the deviation from standard was related to obtaining one sputum sample instead of two and the absence of chest X-rays. The latter was explained by admission of patients who already had chest X-ray done, however the test results were not documented in the case chart (see Figure 12).

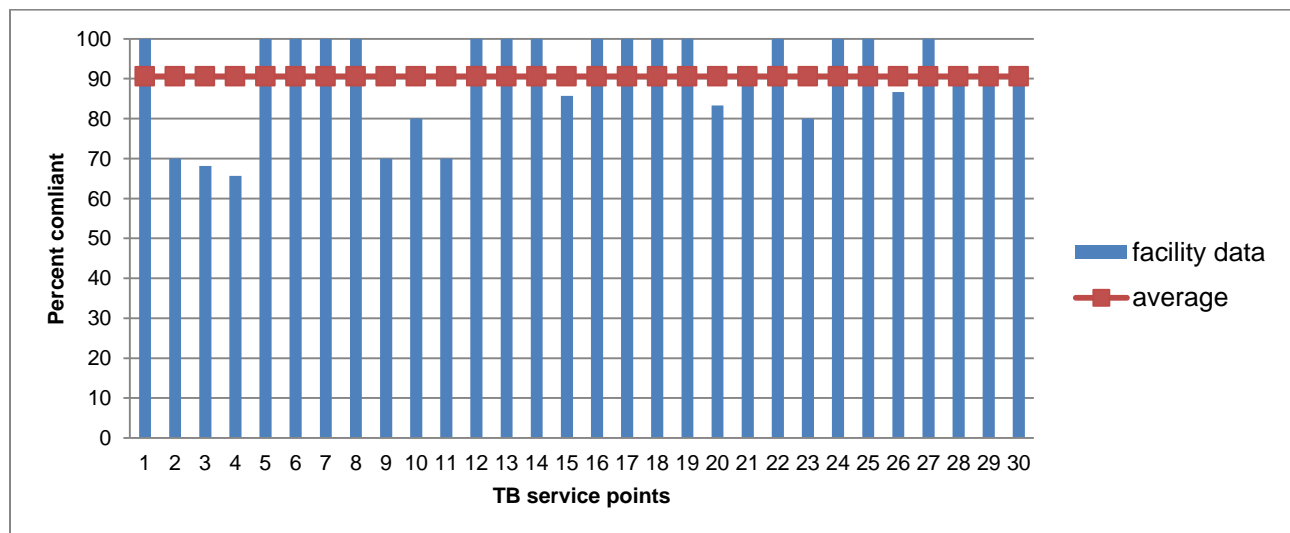
Figure 12: Percentage of cases compliant with diagnostic standard by facility



All the patients with sensitive TB received a four drug regimen 2HRZE during the intensive phase as required by the treatment standard. In two exceptional cases three drugs were prescribed to the patients. In one case the reason was resistance to isoniazid and in another - serious side effects. This practice is also in line with the guideline recommendations.

Standard treatment monitoring for sensitive patients was provided in 90% of cases. Only 53% of facilities fully complied with the standard. Most frequently the standard was not observed due to failure to provide sputum smear microscopy at month 5 (see Figure 13).

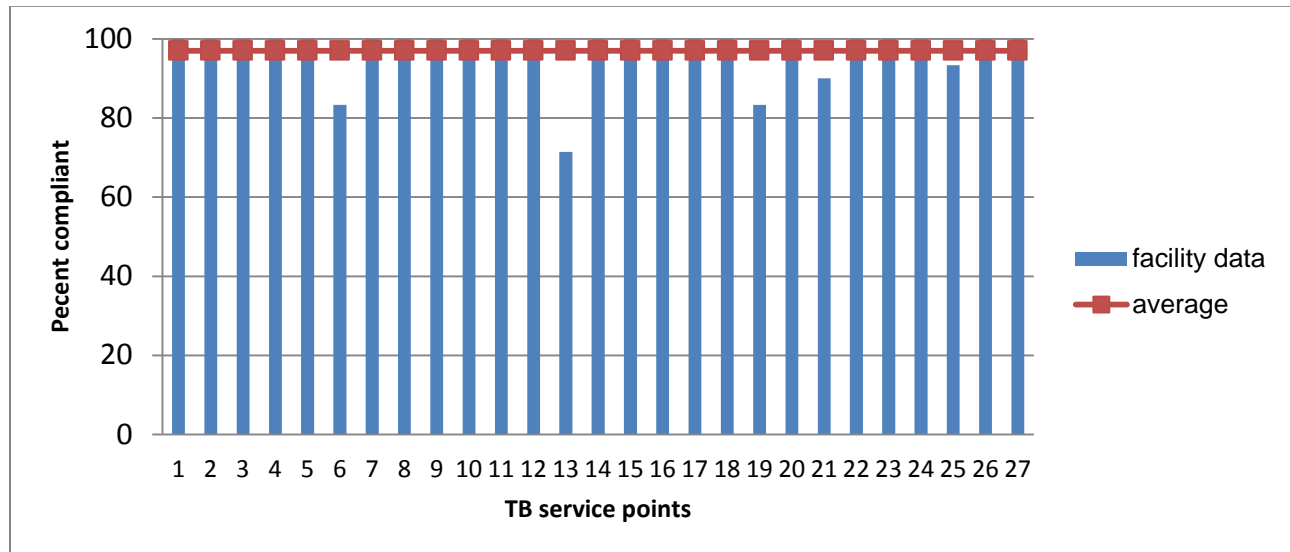
Figure 13: Percentage of cases compliant with regular TB monitoring standard by facility





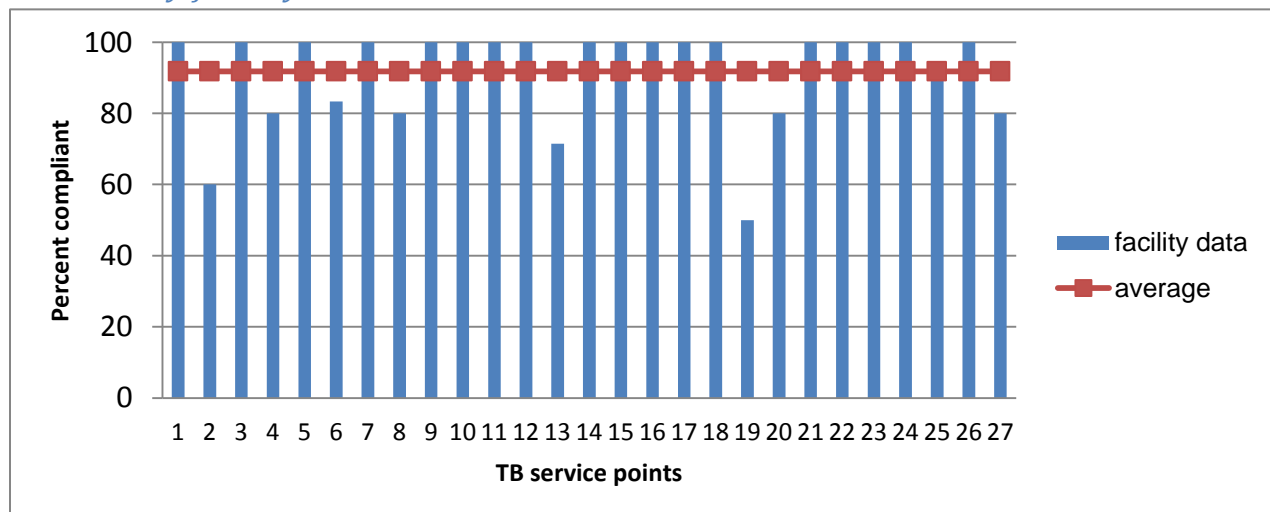
MDR TB patients were treated with at least 4 drugs: fluoroquinolone, injection agent (kanamycin or capreomycin) and at least 2 drugs from the group 4: cycloserine, prothionamide, PAS as required in 97% of cases on average and in all cases in 81% of facilities (see Figure 14).

Figure 14: Percentage of cases compliant with MDR TB treatment standard by facility



Monitoring of TB treatment in MDR patients requires sputum smear microscopy and culture tests monthly and it proved relatively difficult to achieve. On average the treatment monitoring standard was met in 92% of cases and all patients had adequate monitoring in 67% of facilities. In absolute majority of cases both components, microscopy and culture, were missing with equal frequency (see Figure 15).

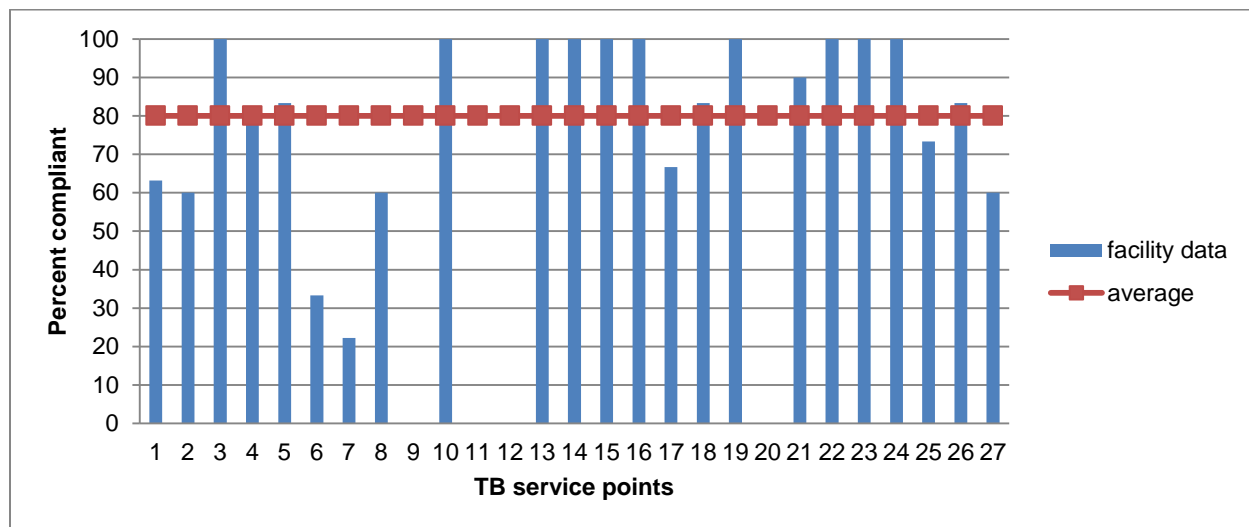
Figure 15: Percentage of cases compliant with MDR TB treatment monitoring standard by facility





DOT standard was the least observed even for MDR patients. On average, the requirements were met in 80% of cases. Only 37% of facilities demonstrated adequate documentation of DOT for all the patients. In other facilities compliance varied from 22% to 90%. Due to various reasons 15% of facilities failed to present any documentation related to DOT. Direct observation of treatment is an integral and essential component of TB care aiming at support of patients to increase adherence to treatment and chance of cure, therefore TPP in collaboration with TB specialists and general practitioners emphasize exploring the opportunities to identify and promote the most suited forms of DOT (see Figure 16).

Figure 16: Percentage of MDR cases compliant with DOT provision standard by facility



The TPP team will continue collecting and analyzing facility level data in FY 2014 to measure progress against quality indicators and learn the extent to which the ongoing activities influence treatment outcomes.

VII. Project Administration

The project administration was provided in accordance with established operational manual for administrative and financial management procedures in close collaboration with the administrative team within URC headquarters in Bethesda, Maryland.



VIII. Budget and Expenditures

Below is the summary of FY 13 budget and expenditures.

LINE ITEM	Approved Budget	Total Spent to date	Balance	Actual Expenditures to Date	
				FY12	FY13
Salaries and Wages	\$966,827	\$441,418.92	\$525,408.08	\$ 158,884.15	\$ 282,534.77
Consultants	\$43,101.00	\$ 146,557.90	\$ (103,456.90)	\$ 18,095.81	\$ 128,462.09
Fringe Benefits	\$67,965.00	\$22,929.38	\$ 45,035.62	\$ 6,217.29	\$ 16,712.09
Travel and Per Diem	\$ 91,696.00	\$142,024.67	\$ (50,328.67)	\$ 40,195.53	\$ 101,829.14
Equipment	\$124,583.00	\$ 49,982.92	\$ 74,600.08	\$ 49,982.92	\$ -
Training	\$701,595.00	\$ 65,701.10	\$635,893.90	\$ 28,825.96	\$ 36,875.14
Other Direct Costs	\$394,147.00	\$152,398.34	\$ 241,748.66	\$ 56,968.26	\$95,430.08
Subcontracts/Sub-agreements	\$1,226,200.00	\$510,564.71	\$715,635.29	\$ 69,602.91	\$ 440,961.80
Sub-total	\$3,616,114.00	\$1,531,577.94	\$2,084,536.06	\$ 428,772.83	\$1,102,805.11
Indirect Costs	\$785,111.00	\$300,559.47	\$ 484,551.53	\$ 100,641.52	\$ 199,917.96
Total Estimated Cost (Billable)	\$ 4,401,225.00	\$ 1,832,137.41	\$ 2,569,087.59	\$ 529,414.35	\$1,302,723.06
Cost Share @ 5%	\$ 220,061.00	\$72,135.17	\$147,925.83	\$ 605.00	\$80,345.59
Total Est'd Cost + Cost Share	\$ 4,621,286.00	\$1,904,272.57	\$ 2,717,013.43	\$ 527,323.22	\$1,374,253.23

Budget Overview	
Total Approved Budget including cost share	\$4,621,286.00
Total Spent to date	\$1,904,272.57
Balance	\$2,717,013.43
Current Obligation	\$3,330,000.00
Total Spent to date	\$1,904,272.57
Balance	\$1,425,727.43
Current Burn Rate	\$90,679.65
Remaining Months	16
Actual Remaining Months	25

IX. Key Activities for FY2014

In Quarter 1 of FY2014 the TPP team will continue the following activities started in Year 2:

- Training of an additional 500 FPs and 500 Nurses in Imereti, Guria, Mtskeha-Mtianeti regions and Tbilisi.



- Field testing of HMIS module and training of TB specialists on use of e-TB module
- Conducting performance appraisals in Imereti region
- Organizing quality improvement collaborative meetings
- Developing and submitting of the draft legal documents
- Launching pediatric TB management guideline and protocols
- Continuing the implementation of four small grant programs and identify new sub-grantees for other initiatives
- Implementing ACSM campaigns to cover both the civilian and penitentiary communities



X. Appendices

X.I. List of deliverables produced in Year 2

1. List of survey and assessment reports produced

- Partnership for Social Initiatives. Health System Barriers to TB Control in Georgia, 2013
- Institute for Social Studies and Analysis and TPP team. Survey of Risk factors associated with default from treatment, 2013
- TPP team. Performance appraisal and continuous professional feedback to FM practitioners in TB service delivery, 2013

2. List of ACSM materials produced

- 350 T-shirts
- 100 scarves
- 2 banners
- 200 posters
- 1000 flyers
- 3000 adherence support brochures
- 3000 stigma reduction brochures
- 3000 contact info brochures
- 5000 brochures for prisoners
- 1000 postcards
- 10000 stigma reduction leaflets
- 5000 stickers
- 1000 posters
- 5 video reels
- 2000 info brochures
- 3000 smart-cards
- 1000 info leaflets
- 1000 Pediatric TB calendars,
- 500 celebrity calendars

3. List of training courses conducted and materials produced

- Training course “early detection and management of TB in general practice for family physicians
- Training course “early detection and management of TB in general practice for nurses”
- Revised training modules in early detection and management of TB in general practice for family physicians and nurses
- PowerPoint presentations of early detection and management of TB in general practice for family physicians and nurses
- Training course in collaborative TB/HIV activities
- PowerPoint presentations of collaborative TB/HIV activities
- Training course "Use of Xpert MTB/RIF System for Rapid Diagnosis of Tuberculosis and Rifampicine Resistance"
- PowerPoint presentations of "Use of Xpert MTB/RIF System for Rapid Diagnosis of Tuberculosis and Rifampicine Resistance"



- Training course for epidemiologists "Tracing of TB Contacts, Ex-prisoners and Lost to Follow Up"
- PowerPoint presentations of tracing of TB Contacts, Ex-prisoners and Lost to Follow Up
- Training course for social workers "Prevention in High Risk-groups and Psycho-social Support of Patients"
- PowerPoint presentations of Prevention in High Risk-groups and Psycho-social Support of Patients
- Training module for TB nurses on the usage of nursing protocols
- Multiple Choice questions for physicians and nurses
- 1000 Job aids for timely identification and management of TB at primary health care level
- 2000 TB case brochures
- 150 Protocols on tracing of TB Contacts, Ex-prisoners and Lost to Follow Up
- 2000 CDs with Computer based training module in TB Management
- 650 protocols for TB nurses (65 packs with 10 protocols each)



X. II. Focus areas and achievements within completed or ongoing small grants programs

Activities	WF ¹	GNA ¹	PSI ²	GHPEF ²	GPPA ²	CBSC ²	Total
Training							
TB nurses		73					73
Non-TB Specialists					83		83
Primary care providers	21						21
Journalists				15			15
NGO representatives	24			115			139
Peer educators	30					30	60
Awareness raising							
Door to Door education campaign			2250 visits				2250 visit
Scholl teachers and kids			180	70			250
Church community/parish						44 priests and bishops	44
Students				320			320
Printed Information materials							
Info leaflets on adherence	6000						6000
Stigma related promo materials	3000						3000
Info leaflets for family members	3000						3000
Info leaflets for general public			10000	3000		10000 + 2000	25000
Info brochures for former prisoners						5000	5000
Stickers with slogans				5000			5000
Posters				1000		1000	2000
T shirts				200			200
Scrolling stander				2			2
Video reels				1		2	3
Talk shows	1			2			3
TB quality improvement tools							
TB care protocols for nurses		11					11
TB care protocols for non-TB specialists					3		3
Operational assessment							
TB nursing care situation analysis		1					1
Health System Barriers to TB Control in Georgia			1				1
TB patient referral practice and Primary Care Providers specific needs in counseling for TB and presumptive TB patients.	1						1

1-Completed; 2-Ongoing



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X.III Pictures of Events